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From drill to doctrine : forging the British Army's tactics 1897-1909

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From Drill to Doctrine.

Forging the British Army's Tactics 1897-1909

When 'Omer smote 'is bloomin' lyre,
He'd 'eard men sing by land and sea,
An' what 'e thought might require,
'E went an' took-the same as me!¹

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PhD War Studies

¹ R Kipling *Verses Definitive Edition* (1977), p 351; chapter headings are drawn from 'Barrack Room Ballads' except 'Arithmetic on the Frontier,' 'A Code of Morals,' 'The Palace' and 'The Lesson'. Individual page citations for chapter headings are not given. The very many persons and institutions on whom this thesis utterly depends should consider the above.

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Abstract. *From Drill to Doctrine. Forging the British Army's Tactics 1897-1909*

This thesis examines the development of the Army's tactics from the 1897-8 Frontier Campaigns until the publication of *Field Service Regulations (FSRs) 1909*.² It scrutinises how the 3 tactical factors of firepower, mobility and protection, together with experience from the NW Frontier, the South African War and Manchuria caused British tactics to develop. The thesis shows that the Army's attitude towards low-level initiative developed significantly. Increased firepower made tactical extension essential. This prevented commanders controlling and made subordinate initiative vital. Developing initiative among subordinates caused the Army's disciplinary, educational and training systems to alter.

The thesis finally examines doctrine's development, a system of fundamental principles designed to guide commanders, who now had to use initiative, in increasingly complex combat. This was caused by greater firepower, longer ranges, smokeless ammunition and wider extensions. This thesis demonstrates that the Army developed doctrine in the modern sense. Consequently changes occurred in the staff system, professional education and general training.

The thesis argues that the Army's firepower grew quantitatively and qualitatively with the introduction of independent and Indirect Fire. Weapons were now developed doctrinally. The Army attached great significance to mobility and manoeuvre, seeing these as the means whereby it could defeat superior numbers. Cavalry roles developed to stress operational level manoeuvre rather than battlefield shock. It examines protection, arguing that the need for tactical extension and fieldcraft, both impelled by greater firepower, enforced initiative.

The thesis argues that contemporaries felt that the 3 wars all taught broadly

² All other abbreviations are in the Glossary.

similar lessons and that the resulting doctrine matched the short war which armies expected.

Chapter 1 Introduction

Now all you recruits what's drafted today,
You shut up your rag-box an' 'ark to my lay,
And I'll sing you a soldier as far as I may.

Outline

Between 1897-1909 the British Army advanced from drill to doctrine. During this period it fought its largest 19th Century Frontier campaign and the South African War, while scrutinising both these conflicts and the Russo-Japanese War for lessons. More or less simultaneously significant technical change occurred, principally the first extensive use of smokeless ammunition, magazine rifles and QF artillery. All increased firepower thus affecting mobility and protection. This thesis examines these 3 fundamental tactical factors, how they changed and their influence on tactics.

This introduction states the thesis' proposition, examines the contemporary contexts and constraints on the Army, current scholarship on British tactics pre-1914 and the thesis' methodology. It analyses tactics, two forms of war, manoeuvre and attrition, which affected how tactics developed, and finally outlines the chapters.

The Thesis' Proposition

This thesis aims to understand why British tactics changed and why the Army in 1909 emphasised mobility and manoeuvre rather than firepower and attrition. It aims to prove that between 1897-1909 the Army made a reasonably coherent attempt to develop tactical doctrine for major warfare. No longer could subordinates receive exact, timely orders in the teeth of enemy fire; instead, often out of communication with superiors, they had to use initiative guided by doctrine. This adoption of doctrine, which Chapter 9 outlines, was very significant. It demanded analysis to develop, thus having implications for the staff, the body charged with examining issues systematically. Furthermore doctrine implies that judgement is required for the exercise of command, rather than

applying drill-derived rules. This in turn affected training and education, while these factors and discipline were altered to instil initiative.

There is no doubt that flaws existed in British tactics in 1909. Firepower and consequently attrition were not accorded the recognition that 1915-1918 was to demand.¹ But the context must be borne in mind, a small regular army, financially stretched, strategically poised between Europe and Empire, later committed to continental campaigning but denied conscription. Thus, given that increasing numbers was impossible, manoeuvre had to be used rather than firepower-dominated attrition.² British tactics in 1909 were designed to defeat superior numbers. Firepower was not devalued; indeed the Army improved its marksmanship and increased weapon numbers. It emphasised protection and technology. The Army's tactical preparations, generally coherent, were based on examination of evidence derived from the 3 wars. The resulting doctrine matched the type of war expected. Scholars working back from the trenches have criticised this, but then as now the future is obscure.³

Contexts and Constraints

1899-1902 had demonstrated both that Britain was diplomatically isolated and that the Army's performance was poor. Reform was imperative. Financial stringency exacerbated by heavy expenditure between 1899-1902, the growth of naval which overtook military spending, and the pressures, political and economic, following the 1906 Election and the rise of the Labour Party, dominated the period. The Army had to maintain expensive global deployments and give drafting priority to overseas units; British-based units consequently resembled in Wolseley's graphic words: 'squeezed lemons.' This damaged training, yet conscription was politically and logistically

¹ Gen Farndale *History of the Royal Regiment of Artillery* (Woolwich 1986), Annex B.

² DMO (1996), pp 4-21-22.

³ PA Towle *The Influence of the Russo-Japanese War* (KCL 1973), pp 385-6.

impossible. Major contingencies ranged from amphibious operations on the American seaboard, combat across the prairies, colonial warfare versus a European power, war in Afghanistan against Russia and European warfare in varying permutations. Minor commitments ranged from: 'Birr to Bareilly,...Hong Kong and Peshawar.'⁴ As the German threat strengthened, the Army's focus switched towards continental warfare, though its integration in French plans was limited until 1911. But, unlike the RN, it was unable to call the legions home. A very real constraint was that the Army began the period which this thesis covers with a very undeveloped staff system.⁵ These contexts influenced the Army, they cannot be analysed fully in this thesis, but should be remembered.

Current Scholarship

Scholarship has focused on the establishment of the GS, Brodrick's and Arnold Foster's attempted reforms of the Army's structure and war-planning.⁶ There has been no comprehensive examination of British tactics before 1914. Scholarship has concentrated on tactics from 1914, tending to work backwards when analysing prewar tactics. But contemporaries were unaware of the course of the First World War, while Bloch had forecast that sustained, mass warfare was impossible.⁷

Dr Samuels' *Command or Control*, the main work on pre-1914 tactics, cannot examine British tactics fully as it covers both British and German tactics between 1888-1918.⁸ His thesis is that British over-rigidity caused 1916-18's tactical mistakes. He contrasts this with greater German flexibility. His book is based on 2 case studies, the

⁴ R Kipling *Verse Definitive Edition* (1977), p 429.

⁵ Professor Bond *The Victorian Army and the Staff College* (1972), pp 153-4.

⁶ Professor Gooch *The Plans of War* (1974), Professor Spiers *Haldane An Army Reformer* (Edinburgh 1980).

⁷ IS Bloch *Modern Weapons and Modern War* (1900), p xi.

⁸ Dr Samuels' *Command or Control* (1995). It examines British tactics pre-1914 between pp 34-60, 1914-18 occupies pp 82-269. Given this disparity, it is argued that Samuels has worked backwards from 1914-18. His work has not analysed British development of initiative and manoeuvre pre-1914.

battles of Thiepval and St Quentin, which distort his conclusions on pre-1914 tactics. Both were atypical of attrition's strengths against better-trained enemies. Great firepower and tactical surprise inflicted heavy blows as 14 July 1916 or Messines showed. However correct Samuels' thesis may be for 1915-17, it does not automatically apply beforehand. 1914-15 forms a tactical watershed and some of his criticisms, overcontrol and rigidity, were due to wartime circumstances rather than prewar error.⁹

The other important work is Professor Travers' *The Killing Ground 1900-1918*. This blames many 1914-1918 failures on 'internal' factors, ie mental rigidity and technological neglect, principally of firepower. Travers' analysis can be criticised: firstly artillery rearmament, Indirect Fire's introduction, the development of aircraft and motorization impugn his criticisms that the British neglected technology. Nor does Travers demonstrate that other European armies were significantly better at incorporating new equipments than Britain.¹⁰ Secondly he attributes failure to learn from South Africa to: 'a surprisingly widespread belief in [its] abnormality.'¹¹ Many contemporaries, far from exclusively British, commented on this. South Africa was far more open than Western Europe, thus favouring firepower at the expense of movement under fire, and mobility when not fighting; the Boers' irregular character, their strategic failure to mount an immediate all-out invasion and their selection of Natal as their objective rather than the more politically-promising Cape Colony, their initial reluctance to assault, their eccentric artillery tactics and their high mobility.¹² All were exceptional by European standards, while the vast size of South Africa, roughly equivalent to Western Europe, favoured mobility, only constrained by poor communications and the

⁹Gen Falkenhayn *General Headquarters 1914-1916* (1919), p 74 suggests that British tactical problems between 1914-16 were caused by insufficient trained cadres.

¹⁰ AR Millett & W Murray *Military Effectiveness I* (Boston 1988), pp 84-5 for German defects. They claim the French were the most technically backward of the major armies in 1914, Ibid p 212.

¹¹ *The Killing Ground 1900-1918* (1993), p 44.

¹² Eg Gen von der Goltz 'The Military Lessons of the South African War' *NR XLII* (1903), pp 372-5.

resulting logistical difficulties. These factors unsurprisingly made contemporaries reluctant to draw lessons. This posed particular problems for cavalry tactics. Opponents of shock emphasised that there were few charges; traditionalists argued that, as the British did not face cavalry, deducing shock's redundancy was unsound.

Griffiths' *Battle Tactics of the Western Front*, Weller's *Weapons and Tactics*, Myatt's *The British Infantry 1660-1945*, Carver's *Britain's Army in the 20th Century* and *The Boer War*, Ramsay's *Command and Cohesion* and Simpson's *Directing Operations* focus on general themes or 1914-18 rather than prewar tactics.¹³ Scholarly works on broader themes can err. D'Ombrain's *War Machinery and High Policy*'s claim that the 18 Pounder was the last significant British innovation before 1914 ignores the introduction of howitzers, motorization and aircraft.¹⁴

Coverage of tactical developments in the arms is imperfect; the most significant contribution covering mainly artillery is Bidwell and Graham's *Firepower*. This argues that artillery was neglected, but it does not examine the contemporary constraints on the arm, while its pre-1914 coverage is small.¹⁵ Scales' *Artillery in Small Wars* does not analyse 1897-1909 in depth.¹⁶ Scales suggests that the British neglected Indirect Fire but ignores conflicting evidence. His argument that the RA erred after 1900 by basing its tactics on small wars, which South Africa was not numerically, downplays Manchuria's influence.¹⁷ Gen Bailey's *Field Artillery and Firepower* does not examine developments before 1914 in depth, while Dr Marble's thesis focuses from 1914.¹⁸ Cavalry are well

¹³ *Battle Tactics of the Western Front* (New Haven 1994); *Weapons and Tactics* (1966); *The British Infantry 1660-1945* (Poole 1983); *Britain's Army in the 20th Century*, (1998) and *The Boer War* (1999); *Command and Cohesion* (Westport 2002), *Directing Operations* (Stroud 2006).

¹⁴ *War Machinery and High Policy*' (1973), p 150 fn 23.

¹⁵ *Firepower* (1982).

¹⁶ *Artillery in Small Wars* (Ann Arbor 1976).

¹⁷ Scales does not cite Maj Geddes *Notes on Japanese and Russian Artillery in Manchuria* (1907) and *Notes upon Russian Artillery Tactics in the War of 1904-5* (1907).

¹⁸ *Field Artillery and Firepower* (Annapolis 2004); *The Infantry cannot do with a Gun Less* (KCL 1999).

covered; the historiography includes Dr Badsey's thesis *Fire and the Sword*, concentrating on the fire versus shock controversy, and Anglesey's *History of the British Cavalry*. Infantry are poorly served with most emphasis post-1914, a noticeable feature of English and Gudmundsson's *On Infantry*. Priestley's *The Signals Service in the European War of 1914-1918* concentrates on 1914-18. Brig Gen Baker-Brown's volume of *The History of the Corps of Royal Engineers* does not link changes to wider themes.¹⁹

Initiative has hardly been tackled as Dr Sheffield's *Leadership in the Trenches* focuses from 1914.²⁰ Professor Holden-Reid summarises British doctrine masterfully but, though giving an invaluable overview, he cannot examine 1897-1909 in depth in an annexe to a manual.²¹

Analysis of wars in the period is flawed. Dr Moreman has scrupulously examined Frontier operations but his work is not intended to consider the 1897-8 Campaigns' wider tactical relevance.²² *The Times History of the War in South Africa* contains much useful material but was written to stimulate reform and consequently has biases. Furthermore the work, completed in 1909, does not provide perspective. Dr Towle's *The Influence of the Russo-Japanese War on British Military and Naval Thought* lacks wider tactical context and therefore does not appreciate certain developments fully. He, like others, has seen Manchuria through the prism of 1914-18, distorting some of his conclusions.²³

Clearly there are gaps in the historiography. There is no broad study linking increased firepower to changes in mobility, protection and developing initiative. The next section briefly summarises the thesis' methodology.

¹⁹ (Cambridge 1986); IV 1899-1913 (1986); (Chatham 1921); IV (Chatham 1952).

²⁰ (KCL 1973); (2000).

²¹ *ADP 2 Command* (1995), pp 2-A-1 to A-13.

Methodology

The thesis tries to work forward towards 1914 rather than backwards from the trenches. It uses military theory to give context to tactical alterations, but has tried to avoid imposing current concepts anachronistically. It is primarily concerned with the development of ideas. Here it must be stressed that between injunction and implementation there is a wide gap. In a largely regimentally-based Army, change took time and was incomplete in 1914.

Much has been made of personalities' malign influences: here Professor Travers' illuminating work seems to miss the prime question, were these worse in the British than in other armies? This would be hard to maintain; *L'Affaire* and *Les Fiches* disrupted the French, friction between Bulow and Kluck damaged German effectiveness in 1914, while there were tensions within the German Army and state. Whether Samsonov thrashed Rennenkampf on Mukden station is immaterial, but there were serious flaws in Russia and its Army.²⁴ This thesis has avoided personalities, looking at the military basis for change.

Tactics and Tactical Factors

Many factors influence tactics, ie the conduct of combat. Basically, however, tactics have 3 fundamental constituents: firepower, mobility and protection.²⁵ These three are interdependent; changing one affects the others. Before 1914 firepower increased forcing more attention to protection; Infantry had to extend, entrench and use ground and cover to the utmost. This was a new emphasis for armies, which until then had fought in relatively close-order and discouraged individual fieldcraft.

²² *The Army in India and the Development of Frontier Warfare 1849-1947* (1998).

²³ Capt Liddell-Hart *The British Way in Warfare* (1932), pp 122-3.

²⁴ D Porch *The March to the Marne* (Cambridge 1981), Chapters 4-7; ED Brose *The Kaiser's Army* (Oxford 2001), pp 5-6; Millett & Murray *Effectiveness* pp 81-2; Maj Gen Knox *With The Russian Army 1914-1917* (1921), pp xxxiv-v.

²⁵ FM Wavell *The Good Soldier* (1948), p 72.

Before 1897 commanders felt that soldiers were unreliable when extended while less effective firearms demanded physical concentration to generate the necessary firepower. Black powder ammunition meant that concealment was lost as soon as fire was opened.²⁶ Cavalry shock action was becoming problematic due to greater firepower, but many argued that dynamic manoeuvre could defeat well-armed, well dug-in enemies by exploiting their static nature. But to defeat defensive firepower the attacker needs more firepower to restore his own mobility, thus the RA was significantly strengthened from 1900. These interrelated factors and their effects are complex and are therefore best described in a generic example which could be drawn from any date from 1908, the introduction of the Army's first grenade, until Afghanistan in 2007.

An Infantry section advances to mop up snipers harassing sappers repairing a road. The section prepares for battle, adjusts camouflage and extends. Soldiers deploy some 10 yards apart; this enhances protection and enables ground to be used for cover, but thus separated, the corporal cannot control each soldier exactly. Individual initiative is vital, individual determination essential, because, so separated, individuals can evade danger at the expense of their task and their comrades. In dispersed combat isolation is real, the sense of uncertainty against an unseen enemy using smokeless ammunition oppressive.²⁷ When soldiers fought shoulder to shoulder casualties were often heavy, but there was at least the close presence of comrades.²⁸ Obedience was all and the dilemmas of decision were spared soldiers, and for that matter many officers. Extension had and for that matter continues to have implications for discipline, leadership and morale.

²⁶ Chapter 2, Capt Gawne *A Summer Night's Dream* (Kansas City nd), pp 19-20. The book, attributed to Meckel, was influential in Germany.

²⁷ Col Marshall *Men Against Fire* (Gloucester 1978), pp 44-5. Marshall's methodology has been severely criticised but few combatants would disagree with this point.

²⁸ J Keegan *The Face of Battle* (1976), p 183; Maj Gen Thompson 'Falklands' OCFW 2007.

The section enters a thicket; on entering it the formation contracts automatically. Leaving it the soldiers, unprompted, extend and, on the commander's order, dash to a sunken lane which offers a covered approach to their objective. As they emerge from it a shot rings out and those moving go through the drill: 'dash, down, crawl, observe, sights, fire.' Though called a drill and practised till responses are instinctive, this differs radically from that conducted upon the square under the RSM. Individuals must think for themselves; decide where to get most cover, from whence their weapons can be most effective and how best to cooperate with their comrades in executing their mission.

The sniper has betrayed his position and those covering their comrades' movement return fire forthwith. The corporal shouts a brief order, fire redoubles while two infantrymen dash to a wall flanking the sniper's hide. Here we see fire countered by greater firepower, affording protection and consequently unscathed movement. They close on the hide, covered by the wall and their comrades' fire, till a well-thrown grenade kills the sniper. The action has taken some 30 minutes from start-line to objective.

This skirmish hardly rates a line even in a unit history but encapsulates the interplay of firepower, protection and mobility.²⁹ The section camouflaged up and extended, maximising protection and reducing the effects of enemy firepower even before crossing their start-line. The advancing infantrymen used ground for cover, thus increasing protection. Ease of movement had to be balanced against exposure. As the ground became open, they instinctively extended, contracting when entering denser cover. We observe the commander first using the lane, not just for protection, it hid the section, but also for faster movement. Both generated surprise. Then, when forced to cross open ground, he deployed men to cover the rest across. We note the prompt return

²⁹ R Holmes *Firing Line* (1985), p 3 notes the lack of tactical detail in many histories.

of fire and the intelligent individual reactions. Movement was directed at weakness, the enemy's flank, fulfilling the commander's aim, and thus becoming manoeuvre. Manoeuvre maximised surprise and surprise provided protection. When soldiers moved, fire increased, pinning the sniper down, unable to reply or withdraw. This integration of fire and manoeuvre is tactically key.³⁰ In short the 3 fundamentals of fire, protection and mobility were combined to defeat the enemy. The proportions of each factor varied as the ground and the threat changed.

Theoretically overwhelming firepower alone could have killed the sniper. An arsenal of artillery ammunition would have been needed, crippling logistics if all actions were so fought. Furthermore, in an age before RT, the time needed would have been significantly greater. A non-gunner may remark that the likely endstate, far from being a clean kill, would probably have been an array of ready-made defensive positions, themselves no mean obstacle to movement.³¹ Another alternative would have been to sap forward, maximising protection, but wasting time. A charge, bald-headed, reckless of cover and covering fire, might have saved time, though not casualties. But it could not have catered for the unexpected. Few tactical situations demand one only of the three fundamentals; reliance on two may not guarantee success, indeed in combat there are no certainties, only probabilities.

Tensions exist between the three tactical factors, had the section been armed with a couple of field guns, its firepower would have been greatly strengthened but its ability to move and use cover would have declined. Maximising mobility by discarding ammunition would have weakened firepower while overemphasising protection would have ensured that the section never crossed their start-line.

³⁰ Brig Gen Edmonds *MOFB 1914 I* (1922), p 9.

³¹ Literally the sticking point 1915-17.

There are other deductions. Firstly the skirmish was based on orders and fitted into a higher plan. Due to prior training, individuals understood this and cooperated to achieve their mission. The commander did not have to order individuals exactly what to do; initiative and training oiled the tactical mechanism. Their task, an advance over relatively open country against a dug-in, hidden enemy, has proved one, if not the hardest tactical problem of 20th Century land warfare. We should note that time, a factor of great tactical importance, was well used. The section neither procrastinated, stymieing the sappers, perhaps delaying a division and allowing the enemy time to react, nor rushed, risking unnecessary casualties.

Another observation is that the corporal did not literally lead; he commanded not through his physical position but more subtly by leadership. This combination of example, persuasion and compulsion fundamentally differed from the Napoleonic era when officers physically led and social status told.³² In the magazine rifle era, professional ability was essential as commanders were generally unable to lead physically, while combat was becoming more complex.³³ Prior training enabled soldiers to cooperate amid combat's chaos. When initiative was not required and when command was relatively easy, training could consist of drill; now doctrine was needed to guide both tactics and training. The corporal and his section did not consciously apply doctrine; nevertheless doctrine was present in the skirmish.

Tactical combat in the rough period 1890-1942 faced a crisis in the means of command. Increased firepower demanded dispersion, but primitive tactical communications constrained superior commanders from controlling and hence

³² FM Slim *Courage* (1957), p 38; J Keegan *The Face of Battle* (1976), pp 168, 186-190.

³³ Commanders can of course still lead physically, but effective forward command is hard, given dispersal and the consequent difficulties of controlling reserves and fire. As Chapter 3 describes, Symons, Buller and Methuen met this problem in 1899. All became casualties from being too far forward.

initiative, delegated downward. Chapters 7 and 9 examine these points.

The above example illustrates low-level tactics. At higher levels the tensions inherent between firepower, mobility and protection give rise to two fundamental forms of combat: manoeuvre and attrition.³⁴ The former favours movement, initiative, surprise, timing and risk-taking, the latter numbers, firepower and more methodical, managerial tactics with risks reduced. To understand why British tactics developed in the way that they did, it is necessary to examine these two forms of war.

Attrition v Manoeuvre

The relationship between manoeuvre and attrition is important for this thesis. States with professional armies tend not to plan long, high-intensity attritional wars, the costs being too high, unless there are strong, countervailing reasons. Generally attrition tends to be adopted as an expedient when manoeuvre is unattainable, because of terrain, force ratios, inadequate skills or for strategic reasons.³⁵ High-intensity attrition emphasises numbers and firepower and tends to be positional and linear, stressing setpiece attack and defence.³⁶ Attrition is dominated by combat's mathematics so when exchange rates are more or less equivalent, numbers prevail. Strategy will ultimately decide whether attrition is adopted, but attrition's decisive level is the tactical where combat occurs and where casualties are inflicted.³⁷

Attrition's emphases subtly alter command and staffwork. Essentially attrition means firepower's application on an enemy, often static in position, thus tactical skills,

³⁴ DMO (1989), pp 22-3.

³⁵ RT Foley *German Strategy and the Path to Verdun* (Cambridge 2005), pp 124-5. Dr W Philpott 'Total War' OCFW 2007.

³⁶ M van Creveld, KS Brower & S Canby *Air Power and Manuever Warfare* (Honolulu 2002), p 9.

³⁷ FW Lanchester *Aircraft in War* (1916) and Brig Bidwell *Modern Warfare* (1973) outline combat's mathematics; Ibid pp 67-68 for manoeuvre and fire. Malkasian emphasises that combat is not only means of attrition, citing Wellington's withdrawal to Torres Vedras, *A History of Modern Wars of Attrition* (Westport 2002), p 6. This was arguably manoeuvre. Malkasian defines attrition as slow by nature and piecemeal, stressing firepower as a significant tool. He cites other types of attrition, here high-intensity attrition between roughly comparable forces on the battlefield is meant.

risktaking and the like, are less critical than in manoeuvre.³⁸ In attrition firepower dominates, thus the managerial processes of assembling and generating it tend to predominate. Here America, with its strong managerial ethos, an unrivalled ability to mass produce weapons and an engineering bias at West Point, has tended towards attrition in fighting its wars. Dumping ammunition and developing logistic facilities for attrition take months; here the Somme's preparations are instructive.³⁹ Monash, an ex-civil engineer, proved adept at attritional warfare. It is hard to see Rommel, an arch-manoeuverist, meticulously planning down to section-level like Monash.⁴⁰ These factors tend to favour central control in attrition. Another reason for central control in attrition is that firepower, the means of causing casualties and the dominant tactical factor, is most effective when concentrated. This is particularly the case with artillery, which saw centralised structures develop faster from 1914 than they had between 1902-1913.⁴¹ This thesis does not argue that the RA were consciously preparing for attrition, but longer-range weapons demanded greater central control.

Contrastingly manoeuvrist doctrine emphasises creativity, with commanders making decisions on inadequate intelligence in order to maintain tempo. But attrition also demands skill; the British development of artillery C³I structures and CB tactics in 1916-17 was a lengthy, scientific process differing from the Germans' emphasis on infiltration. Historians have contrasted British and German infantry tactics rather than comparing the latter with British artillery tactics. Artillery-dominated attrition aimed to

³⁸ EN Luttwak *Strategy* (Cambridge 1987), pp 92-3.

³⁹ Brig Gen Edmonds *MOFB 1916 I* (1932), Chapter X; Ibid pp 301-2; Malkasian's caveats should be noted but fundamentally the Somme was attritional, *Attrition* pp 37-8, 47.

⁴⁰ EN Luttwak & S Koehl *The Dictionary of Modern War* (NY 1991), p 67. Attrition is often attractive as risk is reduced and outputs are measurable. R Beaumont *War, Chaos and History* (Westport 1994), pp 137-8 for the managerial aspects of McNamara's influence on attrition in Vietnam.

⁴¹ R Lewin *Rommel as Military Commander* (1968), p 4; G Serle *John Monash* (Melbourne 1982), p 287. Divisional commanders typically think 2 down ie at battalion level, *DMO* p72; Monash thought 5 down, suggesting tight control. Time would preclude this in high-tempo manoeuvre; Brig Bidwell *Gunners at War* (1970), p 128.

defeat German tactical skills industrially and scientifically.⁴²

Manoeuvre and attrition differ in other ways. One substantial difference is that manoeuvre battles are generally based on a clear, central command aim. Manoeuvre plans to concentrate on enemy weaknesses; consequently all forces must support this. This reinforces the importance of all-arms cooperation in manoeuvre. Manoeuvre relates particularly to war's operational level where campaign aims are decided as Knox and Murray suggest: 'Seekt believed that movement was the essence of operations.' Here Seekt, who developed the Germans' 1939-45 doctrine, was referring to war's operational level.⁴³ Seekt contrasted manoeuvre and attrition:

[t]he soldier who seeks a decision in mobility, rapidity and inspiration, has grave doubts whether armed masses can ever secure such a decision, and whether nations in arms can avoid finishing in the trenches once more.

Seekt implies a relationship between manoeuvre, surprise and creativity. He also suggests the importance of human factors, echoing Clausewitz. Incidentally Seekt fostered initiative during his period as head of the German Army. Chapter 7 argues that initiative is needed to facilitate manoeuvre; Seekt stressed it for similar reasons.⁴⁴ Numbers may not favour mobile forces. In several manoeuvre battles the victorious, albeit more mobile force, has been inferior. This fact reinforces the importance of aims, staffwork and coordination as, unlike in attrition, numbers cannot compensate for errors.⁴⁵ This also suggests why inter-arm cooperation is important in manoeuvre. There is also the technical factor. Manoeuvre forces require sappers to bridge rivers, artillery to cover movement and to provide depth fire, mobile forces to exploit, infantry to seize

⁴² DMO (1989), p 49; Farndale *Artillery Annexes H&L*; Samuels *Command* has no index entry for CB.

⁴³ *The Dynamics of Military Revolution 1300-2050* (Cambridge 2001), p 185; JS Corum *The Roots of Blitzkrieg* (Lawrence 1992), Chapter 4.

⁴⁴ *Thoughts of a Soldier* (1930), p 73; Gen von Clausewitz *On War* (1993), p 101; S Bungay 'The Road to Mission Command' *BAR* 137(2005), p 26.

⁴⁵ BR Posen *The Sources of Military Doctrine* (Ithaca 1984), Table 2 p 83. Examples include COMPASS and SICHELSCHNITT, described in R Holmes *Army Battlefield Guide* (1995), Chapter 4, and Jackson's Valley Campaign; J Keegan *Intelligence in War* (2006), Chapter 3.

ground, with signals to articulate the whole, all coordinated in dynamic manoeuvre by the staff. Attrition's brutal formula: 'guns conquer, infantry occupy' suggests that inter-arm cooperation, however desirable, is fundamentally subordinate in the materialschlacht.⁴⁶

Attrition essentially involves tactical destruction, while in manoeuvre the enemy may be beaten by dislocation at the operational level based on combining aim, mobility, tempo and surprise. This reduces but does not completely eliminate the need for combat. It therefore follows that the commander's aim is critical in manoeuvre.⁴⁷ When attrition dominates, though aims are important, they are somewhat less so and numbers have enhanced significance.

Dynamic manoeuvre, say a cavalry action, though contemporaries might cite an air/attack helicopter/air manoeuvre mission, demands initiative and stresses time in a way that attritional, positional warfare, say a siege, does not.⁴⁸ In siege warfare, though time is important, Wellington's sieges were botched by the need for speed, but it is measured in days rather than manoeuvre's minutes.⁴⁹ Siege warfare is dominated by fire; consequently immense logistic preparations are needed, risking surprise. This is another reason why manoeuvre may emphasise numbers less than attrition does. In attrition time for logistic preparations allow communications to be established, plans rehearsed and control imposed.⁵⁰ Here the Somme's rigid barrage programmes and setpiece attacks are suggestive. Of these General Farndale commented mordantly: 'time-

⁴⁶ A Horne *The Price of Glory* (1962), p 137.

⁴⁷ A Horne *To Lose a Battle* (1969), pp 323,328-330. There is of course combat in manoeuvre, but the fighting and casualties in SICHELSCHNITT relative to GERICHT are suggestive. For the importance of the commander's aim in manoeuvre, see Capt Falls *Military Operations Egypt and Palestine II* (1930), Chapter 21 or Manstein's effect on SICHELSCHNITT, Maj Ellis *The War in France and Flanders* (1953), pp 339-41.

⁴⁸ A Green *Writing the Great War* (2003), p 70 for 76 pages and 365 instructions that took 3 days to condense into a brigade operation order in 1916.

⁴⁹ Lt Col Maude *Cavalry: its past and future* (1903), pp x-xi.

⁵⁰ Eg the spectrum of control lines; *MOFB 1917 I Maps* (1940), Map 5.

tables kill initiative.' Generally less initiative is needed in attritional, positional warfare than in manoeuvre;⁵¹ in attrition material superiority aims to compensate for inferior skills and initiative. But firepower does enforce low-level initiative through dispersion and cut communications. The explanation is that in manoeuvre initiative is inherent; in attrition it is a consequence of firepower.⁵²

The attritional battles of 1916-17 contrast with the confused mobile actions around Tobruk in 1941-2. There command was hard for both sides, imposed control from the rear nearly impossible.⁵³ In 1916-18 numbers proved decisive, but at Gazala, despite superior numbers, the British lost. German training, tempo, all-arms cooperation, and, by extension, doctrine proved decisive. Contrastingly attrition in 1916-7 eroded superior German training and C².⁵⁴ Suggestively the Germans, obligated by geography and likely numerical inferiority to emphasise manoeuvre, developed modern doctrine.⁵⁵ In manoeuvre combat the relationship between success and numerical superiority is more subtle than attrition's mathematics. Smaller forces move faster, command is simpler and logistics are less complex.⁵⁶ Superior mobility transformed into manoeuvre may enable smaller forces to defeat larger ones. But there are many risks and a point at which numbers ultimately prevail.

The relationships suggested above are broad, there are elements of attrition in manoeuvre and the reverse. Firepower is often needed to kickstart manoeuvre, while

⁵¹ Edmonds *MOFB 1916 I* p 296; *History of the [RA] Western Front* (Woolwich 1986), pp 142-3 details the 7000 miles of buried and 43,000 surface-laid cable.

⁵² Brig Gen Edmonds & Lt Col Maxwell-Hyslop *MOFB 1918 V* (1947), p 577.

⁵³ Green *Great* p 70; Bidwell *Gunners* p 163.

⁵⁴ FM Carver *Tobruk* (1972), pp 267-8, 273; M van Creveld *Fighting Power* (Pennsylvania 1983), pp 30-1 citing *Truppenfuhrung 1936*. These emphasise doctrine as well as initiative; Capt Miles *MOFB 1916 II* (1938), pp 555-6.

⁵⁵ Cdt Colin *The Transformations of War* (1912), pp 109-10; Gen Clausewitz *On War* (1993), p 792.

⁵⁶ Crude speeds are not faster but smaller traffic volumes, orders that have to percolate less far increase tempo, eg Jackson's Valley Campaign. Carver contrasts German with more sluggish British C3 at Gazala, *Tobruk*, pp 262, 263-4. Smaller forces are easier to provide with advanced equipments, eg British motorization pre-1914.

manoeuvre makes fire more effective.⁵⁷

The next section outlines the chapters and their contents. South Africa, a seminal experience for the Army, has been given 4 chapters; one examines general issues, the other chapters analyse firepower, mobility and protection.

Chapter Outline

Chapter 2. The 1897-8 Frontier Campaigns

This chapter assesses British tactics in 1897. They were dominated by control, much low-level training was monotonous drill and the implications of growing firepower were largely ignored. *IDB 1896*, the only all-arms tactical manual, overemphasised control, ignored fieldcraft and downplayed initiative.

In Tirah the British discovered that their tactics were inadequate against rifle-armed foes. Consequently they introduced looser formations and greater low-level initiative. Artillery organisations and shooting improved to counter enhanced enemy firepower and fieldcraft. The reaction to increased enemy firepower blended firepower, mobility and protection. Tirah was a precursor to South Africa.

Chapter 3 South Africa

The chapter sets the scene for later ones analysing the war. It looks at the pattern of operations in South Africa. The exhaustive examination of the war for lessons has been under-researched. This investigation was substantial, probing, but in the spirit of the time was partly left to individuals and semi-official bodies. South African operations were more complex than many have realised. Too many mistakes have been ascribed to stupidity or conservatism, while conditions there have not been fully appreciated. The Boers, using magazine rifles, technically superior artillery, high mobility and careful attention to protection, were formidable foes. They combined these 3 fundamental

⁵⁷ WS Lind *Maneuver Warfare Handbook* (Boulder 1985), p 21.

tactical elements effectively. Part of the British tactical problem stemmed from insufficient artillery, a longstanding defect, cavalry weaknesses exacerbated by the open terrain, part from the circumstances of mobilization and the sea-movement of animals to South Africa which impaired mobility.

Buller's troops, obliged by insufficient mobility to attack frontally, learnt lessons, especially on howitzers, machine guns and integrating fire to cover attacks that Roberts' forces were less exposed to. But Roberts' organisational changes maximised mobility, while he ensured that it was fully exploited. During the guerrilla phase extra emphasis was given to mobility. The war taught that, to counter enhanced enemy firepower, the British needed more firepower, principally additional artillery, extra mobility to outmanoeuvre the enemy, better protection to defeat hostile fire and initiative to oil the tactical mechanism.

Chapter 4 Firepower

The chapter analyses South Africa's firepower lessons. Boer fire and the resulting casualties shocked the British. Broadly the Army concluded that more firepower was needed to counter greater enemy fire. Consequently British artillery was significantly enhanced both quantitatively and qualitatively. South African experience influenced the weapons used between 1914-18, the SMLE, the Vickers machine gun, the 13, 18 and 60 Pounders, and the 4.5" Howitzer. QF artillery rearmament was one of the Army's largest peacetime programmes before 1914. Practical marksmanship was emphasised, independent fire replaced volleys, and artillery used more Indirect Fire.

Chapter 5 Mobility and Manoeuvre

The chapter analyses South Africa's mobility lessons. Exceptionally nearly all Boers were mounted. To counter high Boer mobility, Roberts reorganised his mounted troops and transport. After the war the Army substantially improved its mobility. This

was not caused by a reactionary cavalry clique but was a reasoned response to overcome entrenched firepower. The Cavalry retrained after the war while animal management and transport improved.

Essentially the Army aimed to use superior mobility to remedy numerical inferiority. In some respects the Army was applying a manoeuvrist approach; unsurprisingly the most influential contemporary book, *Stonewall Jackson*, examined the defeat of large, less mobile forces by a smaller, speedier one exploiting surprise to achieve operational-level results.⁵⁸ That Henderson, its author, was intimately involved with drafting *CTrg 1902*, reinforces the book's importance. It is argued that the Cavalry's roles were shifting from tactical shock towards operational level manoeuvre and reconnaissance in the period.

Chapter 6 Protection

Increased firepower made protection more essential. Consequently fieldcraft, entrenchment, extension and general protection were much improved between 1899-1902. Protection involves a variety of elements including entrenchment, extension and fieldcraft. The Chapter also briefly examines the REs and technology due to the links between the two.

Chapter 7 Initiative

The Chapter continues Chapter 2's analysis of low-level initiative. Smokeless ammunition and greater firepower demanded that initiative was delegated.⁵⁹ This change was incomplete in 1914; it involved altering regimental cultures, many were resistant to change; others, often LI, influenced by their own culture of delegation, adapted more swiftly. There was much interest in the LI; this began before 1899 and South Africa

⁵⁸ Lt Col Henderson *Stonewall Jackson* (1898).

⁵⁹ *RCWSA Evidence I* p 45.

strengthened it.⁶⁰ The many works written on scouting after 1902 suggest how initiative was being developed in the junior ranks.⁶¹ Many argued for higher-calibre recruits to meet modern war's demands and recommended increasing pay to obtain them.⁶² But improved soldiers' conditions were instituted for other reasons than just the tactical; recruiting and rising civil expectations also featured. Initiative was encouraged and education became mandatory for receiving Service Pay. The Army was moving from imposed towards internal discipline fostered by patriotism and education, partly to enhance initiative.⁶³

Chapter 8 The Russo-Japanese War

The chapter looks at the British analysis of Manchuria's lessons. Broadly the British felt that Manchuria's lessons were similar to South Africa's; this is sharply at variance with current scholarship. The British criticised both sides' immobility, though they partly blamed Manchuria's rough terrain and defects in the Russian cavalry.⁶⁴ Many diagnosed that the Russians had suffered from inertia and poor education, while the Japanese victory seemed to be founded largely on morale and initiative. The British had suffered from defective human factors between 1899-1902 and had altered their own system, thus the Japanese example proved interesting. The British made further changes, based on Manchuria, in their treatment of human factors. British reports criticised both sides' infantry tactics as primitive. Manchuria encouraged the adoption of Indirect Fire, arguably the most significant single tactical development between 1900-14. But Manchuria was not the only cause; South African experience was significant. Manchuria renewed British interest in night operations, siege-warfare and spurred development of siege weapons.

⁶⁰ FM Roberts 'The Army-As It Was...' /9C LVII(1905), p 3.

⁶¹ Lt Col Baden-Powell *Aids to Scouting for NCOs and Men* (Aldershot 1899); Col Furse *Scouting* (1902).

⁶² Eg A Lee 'The Recruiting Question' /9C XLIX (1901), pp 1058-60.

The chapter argues that the results of attrition in Manchuria appeared to confirm the British emphasis on manoeuvre. There is clearly, however, tension between the detailed reports on grenades, entrenchment, artillery's enhanced effects and British conclusions on manoeuvre and cavalry. It argues that the Russo-Japanese War was more influential tactically than Dr Towle states.

Chapter 9 Doctrine

The chapter argues that the Army started to switch from drill to doctrine, thus relying more on principles, judgement and initiative. It scrutinises the relationship between doctrine, initiative, manoeuvre and the operational level of war. The chapter examines the contents and themes of *CTrg 1902*, *CTrg 1905* and *FSRs 1909* to show how tactics developed. It looks at the GS's creation and importance for training and doctrine. It argues that a system of training, doctrine and manoeuvre was developed. This demanded a significant alteration to the Army's mental attitudes.

Chapter 10 Conclusions

This chapter summarises the thesis' arguments outlined above. It explains why British tactics put a premium on manoeuvre and mobility rather than on firepower or protection. But it argues that neither of these factors was neglected even though they did not receive as much attention as 1915-17 was to demand. It illuminates the relationships between attrition and manoeuvre and between doctrine, manoeuvre and initiative. It argues that the British stress on cavalry represented a shift towards the operational level of war. Current military science suggests that this was not inappropriate. To view the British emphasis on cavalry in 1914 as just the product of reactionary internal forces is wrong. But that is not to say that such forces did not exist in the Army.

⁶³ Brig Gen Haking *Company Training* (1913), p 1.

⁶⁴ Capt Nash 'A Brief Summary of the Manchurian Campaign' *PRAI* XXXII (1905-6), p 324.

Inevitably there are gaps in this work. It lacks comparisons with foreign armies and the effects of wider social trends have been under-examined. Some areas where further research is needed are outlined in an annexe.

Chapter 2 Tactics, Tirah and LI

For the tale is on the Frontier and from Michni to Mooltan,
They know that worthy general as that most immoral man.

Introduction

As Kipling points out, reputations were lost on the Frontier and if military change is measured by generals dismissed, then the 1897-8 Frontier Campaigns were influential. Defeat, by general agreement, is more productive of military innovation than victory, and though these campaigns in which Imperial forces fought hard, sometimes unsuccessfully, were not a rout, yet they gave valuable lessons. They and renewed interest in LI culminated in Henderson's lecture 'The Technical Training of Infantry.' Henderson and his collaborator, Verner, synthesising the two, proposed new Infantry tactics based on initiative, independent fire and fieldcraft. Contrastingly *IDB 1896* emphasised control, close-order and volleys.

This chapter briefly examines Infantry tactics in 1897, the LI revival, the Campaigns' lessons, their application and finally the links which contemporaries made between Tirah, the most tactically-advanced of the 1897-8 Campaigns, and South Africa.

The Campaigns

The 1897-8 Campaigns were the largest Indian operation between 1881-1914.

Some saw them as the:

most arduous contest ... since the great mutiny...For the first time in our Indian history we have ... found ourselves confronted by modern weapons, combined with full ability to use them, tactics exactly suited ... to our disadvantage, and a knowledge of the art of modern war.¹

Their scale required units, untrained for hill-warfare, to deploy.² These units, unaware of its specialised tactics, tended to follow *IDB 1896* and suffered in consequence.

The history of the Campaigns is unimportant for this thesis and is merely

¹ *USG* (29/1/98), p 92.

² TR Moreman *The Army in India and the Development of Frontier Warfare* (1998), p 55.

summarised here. Operations began on 10 July 1897 when a column was ambushed in the Tochi. Though this rising was quickly quelled, other revolts soon erupted. These were generally less demanding than Tirah as the tribes had fewer firearms and the terrain was easier, but there were still some hard-fought actions.³ Later the Afridis rebelled, expelling the Khyber garrison. This humiliation triggered the invasion of Tirah, the Afridi heartland, but logistic constraints and other continuing operations delayed this until mid-October 1897. At 2nd Dargai hard fighting and heavy shelling from two divisions' guns were needed to storm the pass, conquered with many casualties.⁴ Thereafter combat degenerated into skirmishes in which several British battalions suffered severely. Withdrawal in December resembled a defeat, casualties were heavy and operations continued into 1898.⁵

Tactical Performance in 1897

To see why Tirah was significant, it is necessary though hard to establish the Army's existing tactical standards. Professors Beckett and Gooch argue that they had advanced considerably before 1897.⁶ There had undoubtedly been change. Wood had improved training at Aldershot, some decentralisation had occurred, artillery training had been overhauled and major manoeuvres reintroduced.⁷ But these measures were inadequate judging by performance in 1897 and 1899. A low threat of major war, financial stringency and the need to provide colonial drafts damaged training in Britain. Military, particularly overseas service was unpopular so recruit-

³ Maj Kemball *Operations of the Tochi Field Force in 1897-98* (Simla 1900); Capt Walters *Operations of the Malakand Field Force and the Buner Field Force* (Simla 1900); Maj Houghton *Operations of the Mohmand Field Force in 1897* (Simla 1899), Capt Walters *Operations of the Tirah Expeditionary Force 1897-8* (Simla 1900).

⁴ Capt Edwards 'Recent Frontier Warfare' *JUSII* XXVII (1898), pp 357-8. Col Hutchinson 'The Story of Tirah and the Lessons of the Campaign' *JUSII* XXVIII (1898), p 249.

⁵ *RCTTEF* Appendix CC; L/MIL/7/15867 No 89D; Capt Shadwell Lockhart's *Advance Through Tirah* (1902), pp 200-4. Later another British unit was mauled, Col Callwell *Tirah 1897* (1911), p 95; WPs 38/11/40; L/MIL/3/1082 GO 620 Simla 3/6/98 lists 287 killed, 853 wounded, 10 missing, plus sick.

⁶ J Gooch 'Britain and the Boer War' p 51 in GJ Andreopoulos and HE Selesky *The Aftermath of Defeat* (New Haven 1994), IFW Beckett *The Victorians at War* (2003), pp 234-5.

⁷ C Williams *The Life of Lieutenant General Sir HE Wood* (1892), pp 227-233; WO 279/4 pp vii-ix. LS Amery *THWSA* VI (1909), p 477; Table 35.

calibre was often poor, especially for Infantry. This further encouraged over-control by superiors.

The British emphasis on control, dense formations and fire-tactics centred on volleys, weakened initiative and were unsuited to the dispersed warfare which modern weapons now demanded.⁸ On manoeuvres a brigade deployed with 10 paces between units, the commander controlling: 'up to a late point in the ... attack.' Close-order prevented individuals from using cover effectively, while fieldcraft training was either poor or non-existent. 'In peace training the idea has prevailed that it is not desirable to impress the soldier too much with the care of his own skin.'⁹ A senior officer commented that the 1898 Manoeuvres had:

constantly afforded examples which proved that there was no adequate conception of the power of the modern magazine rifle.¹⁰

Most colonial particularly many African campaigns were against primitive foes, thus reinforcing control-based tactics. This damaged performance against more tactically-advanced enemies. The Akers-Douglas Committee assessed that colonial warfare had weakened professionalism; careers were generally founded on campaigning rather than study.¹¹ General Maurice blamed the Sudan's close-order formations and volleys for South Africa's initial failures, while Ellison reflected in 1900:

the small campaigns of the past [25] years ... had an adverse influence on our military system, not only as regards the tactical ideas ... prevalent prior to [1899], but also [on] the actual conduct of ... operations.¹²

Though the Army's tactics were based on the German Army's reassessment of 1870 and were designed for conventional combat, close-order and volleys suited most colonial wars.¹³

⁸ Lt Col Barrow *Infantry Fire Tactics* (Hong Kong 1895), pp 4-5; 'Staff Officer' 'The War and the Drill Book' *CR LXXVIII* (1900), p 208; Col Mackinnon *The Volley and The Instruction of Recruits and Trained Soldiers* (1897), p 7.

⁹ HuPs 50102; 'Curragh Drill Season 1897... 9th July,' *Ibid* 8/6/97; 'Staff Officer' 'War,' p 211.

¹⁰ PRO 30/40/16 'untitled memorandum on weapons.'

¹¹ Col Clarke 'Lessons of the War-VI Training' *The Times* 28/2/01 p 8; WO 279/9 p 133.

¹² Col Maurice *Sir Frederick Maurice* (1913), p 96; EPs 8704-35-30 'CISOCS' p 6.

COs, adjutants and RSMs dominated Infantry training, much was drill, appropriate for close-order combat but impairing initiative in dispersed fighting.¹⁴ That company commanders tended to be relatively junior and that there was little effective organisation below company-level further reinforced battalion control. As a result many British battalions were over-centralised and thus unready for open-order combat. Infantry basic training was governed by: 'regulations which lacked commonsense and promoted the machine mentality.'¹⁵ A contemporary summarised prewar conditions:

training was dull, uninteresting, and unpractical; money was ... not unfrequently (sic) absolutely withheld for manoeuvres... while military virtue carried ... no reward.¹⁶

India had many advantages over Britain: there was more land for exercises, more frequent manoeuvres, more chances of action and for juniors to use initiative.¹⁷ Units were stronger, making training more realistic. The best Indian infantry and cavalry, unlike most British units, were trained in skirmishing or in combined fire and mounted tactics. That the Army in India was better trained and more tactically advanced than that in Britain, yet it suffered in Tirah. This made the lessons of 1897-8 more salient.¹⁸

Formations were usually established on mobilization. A Tirah veteran commented that a brigade might consist of units: 'from Bangalore, Mhow and Peshawar ... the General from Belgaum, with ... staff from *anywhere* (except ... Simla).' There were insufficient pscs and staffwork was unsystematic, exacerbating

¹³ Initial German lessons on dispersal were countered by works such as Meckel's *A Summer Night's Dream*; Col Maude analysed this reaction, *Notes on the Evolution of Infantry Tactics* (1905). Similarly RA tactics were based on 1870 but fitted many colonial wars, see Chapter 4.

¹⁴ Omdurman was the last battle in which foot-drill played a significant part, Col Callwell *Small Wars* (1906), pp 387-8; Maj Pollock 'The Battle-Drill of Infantry' *JRUSI* XLII (1898), pp 540-1.

¹⁵ Maude *Infantry Tactics*, p 88, he excepted LI; *BA* LIX (1897), pp 575-6; MMPs 2/2 'Infantry Attachment' p 3; Lt Col Pollock 'The Training of the Army' *JRUSI* XLVII (1903), p 177.

¹⁶ Col Verner 'A French View of Our Army in South Africa.' *MM* 86(1902), p 387; Maj Gen Russell 'Our Uneducated Officers' *19C* LII (1902), p 91.

¹⁷ *BA* 88 (1912), p369; Akers-Douglas Report (1902), p 50. Long officer leave and high sickness rates allowed subordinates scope. Maj Yate *The Life of Lieut. Col John Haughton* (1900), p 74; Maj Gen Collen *RCWSA Evidence II* (1903), Qs 21061-7.

¹⁸ Maj Yate 'North-West Frontier Warfare' *JRUSI* XII (1898), p 1191.

the problem of incoherent organisations. Both were more acute in India, both impaired tactical performance, while staff weaknesses prevented thorough analysis of tactics.¹⁹

The Army's only all-arms tactical manual, Part V of *IDB 1896*, forbade 'normal' formations, but often generals devised their own, discouraging initiative and impairing tactical coordination.²⁰ Henderson commented tellingly: 'in a normal formation the importance of ground is apt to receive less consideration than the maintenance of order, regularity and fire-discipline.'²¹ *IDB 1896* had no detailed instructions on fieldcraft or skirmishing. Battalions which practiced skirmishing, principally LI, were censured, despite *IDB 1896*'s advice: 'conditions of modern warfare render it imperative that all ranks ... act for themselves.'²² Many criticised the omission of skirmishing from *IDB*. Col Meysey-Thompson commented:

after nine year's experience skirmishing as adjutant and five year's experience of the "attack" as [CO], that for [LI] work the present system cannot compare with the old.²³

That the Army's only all-arms tactical manual was an Infantry work probably damaged inter-arm cooperation, while its title 'Drill Book' suggests rigidity; it contains much drill, relatively little tactics and even less all-arms tactics.²⁴ It implied that drill remained useful in combat as Omdurman had demonstrated. Its fire-tactics stressed: 'volley firing is the description of collective fire generally employed, while independent is the exception.' It defined fire-discipline as the: 'unhesitating obedience to ...orders of the fire unit commander [by] the men who deliver the fire.'

¹⁹ Hutchinson 'Tirah' *JUSII*, p 254. Geographers will appreciate his irony! 'An Eyewitness' 'The Tirah Campaign' *FR LXIII* (1898), pp 392-4; *USG* (11/9/97), p 723; CAB 14/17 Clarke/Kitchener 20/9/05 p 2. In Britain in 1904-5 63.45% of pscs were in staff posts, in India 23.3%. There were probably fewer pscs serving on the Indian staff in 1897.

²⁰ *IDB* p 129; Glossary. Only *IDB*'s Part V covered all-arms tactics. Formations with unique tactics find cooperation with others hard.

²¹ Lt Col Henderson 'The Training of Infantry for Attack' *USM XIX* (1899), p 504.

²² *IDB 1896*'s 'Drill of a Section in Extended Order' was mechanical compared to the definition of skirmishing see fn 27 below; 'Staff Officer' 'War' p 209 felt that provisos weakened *IDB*'s advice on initiative; *IDB* p 130; Lt Col Verner 'A Red Light Bob on Riflemen' *RBC* (1899), pp 107-8.

²³ *Reminiscences of the Course, the Camp and the Chase* (1898), p 153.

²⁴ *IDB*'s Part V 'Combined Tactics' extends between pp 107-132; low-level drill pp 1-75.

A contemporary castigated the results:

A fruitful cause of insufficient extension and taking cover is the fetish of volley firing. Volleys require control: control means men kept together.²⁵

This damaged initiative, impaired individual fieldcraft and caused unnecessary casualties. Veterans later felt that 'Aldershot tactics,' based on control and close-order, had ill results in South Africa. Against tactically primitive or poorly-armed foes, modern weapons, close-order tactics, imposed discipline and logistics prevailed as Omdurman had demonstrated. But they failed against small-bore, flat-trajectory rifles and the dispersed tactics used by Afridis and Boers.

The LI Revival

In contrast to the close-order tactics outlined above, there was a renewal of interest in LI in the 1890s. To understand this process, it is necessary to look at LI's culture, developed for extended-order combat. This is commonly ascribed to Moore and Shorncliffe, though recent scholarship suggests that its origins are more complex.²⁶ Whatever the causes, LI, especially those units which had fought in the Peninsular Light Division, continued to emphasise the tactical importance of companies, initiative, individual marksmanship, 'internal' discipline, education, fieldcraft and skirmishing, which an LI officer defined:

The men follow the lead of their officers, *thinking and acting for themselves* (sic). By this is meant that they judge where to find cover, how to make the best use of it, when to leave their cover, when to fire...[and] what to fire at.²⁷

Here the link between fieldcraft, initiative and fire-tactics is made explicit.

Contemporaries saw skirmishing, inserted in *IDB 1889* by a rifleman but later deleted, as a specialist LI skill. Skirmishing was becoming essential for all Infantry as commanders could no longer control or soldiers survive in the teeth of enemy

²⁵ *MRs 1898* pp 82,79; 'Staff Officer' 'War' p 208.

²⁶ D Gates *The British Light Infantry Arm* (1987), Chapter 4.

²⁷ 'Col Manningham's Regulations for Rifle Corps' reprinted *RBC* (1897); Col Plowden 'Notes on Skirmishing' *OxLI* (1900), p 286, this used much Tirah material; [SOs] *1st Battalion Oxfordshire Light Infantry* (Portsmouth 1890), p 37 ordered officers to own a unit work on skirmishing; Glossary.

fire.²⁸ The LI system's qualities of initiative, intelligence and leadership were becoming necessary for all infantrymen in dispersed fighting. Consequently LI skills indicate tactical change and contemporaries cited them when advocating reform.²⁹

Interest in LI and their tactics increased in the 1890s. It is impossible to prove why this occurred but it was possibly a reaction to the reassessment of the tactical lessons of 1870-1, which had reimposed close-order and control. But even some LI units were poor at fieldcraft, suggesting that the long Victorian peace had weakened their tactical heritage.

The first visible sign of the LI revival was the founding of two regimental annuals in the early 1890s, *The RBC* and *The OXLIC*. The former inspired the latter. Both were more professionally-orientated than most regimental productions; both reprinted historically significant works. *The OXLIC 1897* republished Gawler's *The Essentials of Good Skirmishing*, possibly because of Tirah. The edition had much Frontier material, Tirah had shown that skirmishing was essential, yet *IDB 1896* did not cover it. Later the editor, Mockler-Ferryman, remarked:

the principles laid down in [Gawler] are as sound ... as they were when written... forming the foundation of the resuscitated *skirmishing* in the new *Infantry Drill* (sic).

This referred to Lt Col Verner who had passed a copy of Gawler's book and other LI works to Henderson to aid him in drafting *IT 1902*.³⁰

From 1899 non-LI officers, including Henderson and later Roberts, became interested in LI methods and there were several books on the LI pioneers. A magazine urged: 'it is to this old system of [LI] training that we must look for the effectiveness of our military training in the future.' Maude, an ex-sapper, praised the

²⁸ 'Review *Infantry Training (Provisional) 1902*' *RBC* (1902), p 159; Lt Col Martin *Mountain and Savage Warfare* (Allahabad 1899), p 3. See the comment on *IDB 1896*'s S 47 'Drill of a Section in Extended Order,' fn above.

²⁹ HuPs 50112 pp 13-15. Hutton served under Hawley who, possibly unconsciously, followed Moore's methods. Hutton as Adjutant fell out with an authoritarian CO who rejected his unit's ethos.

³⁰ *OXLIC* (1901), pp 161-2; *The RBC* began in 1890, *The OXLIC* in 1893. Verner and Mockler-Ferryman, the respective editors, toured the Peninsular battlefields together. The latter wrote on shooting, see Chapter 4.

Peninsular LI and a widely-circulated article stressed the LI system as an example of how the Army could improve its tactical performance.³¹ This system combined training, leadership, education, delegation and ‘internal’ discipline to develop judgement so that initiative was used correctly.³² Later Col Maurice, a non-LI officer, stressed the value of Moore’s system in training subordinates to use initiative.

The Frontier’s Terrain, Enemy and Tactics

This section examines what was significant tactically in 1897-8 and outlines the complex interrelationship between terrain, threat and tactical factors. It provides context for later analysis, supporting the argument that Tirah particularly saw modern tactical features.

The first factor was the Frontier’s very broken terrain. On Tirah’s Marches: ‘higher and steeper’ mountains, valleys: ‘V-shaped instead of flat-bottomed ... added to the difficulties of regular troops.’³³ These features limited movement to frontages sometimes only yards wide. Transport, itself pack, usually had to move in single file extending column-lengths inordinately.³⁴ Broken terrain and long-range fire had the effect of: ‘breaking [troops] up into small parties.’ This demanded low-level initiative, but many juniors were untrained to display it. Terrain militated against close-order tactics, replicating firepower’s effects in more intense combat. Not that tribal firepower was puny. India had not appreciated that 50% of the 30,000 Afridis had breech-loading, long-range rifles.³⁵ Greater tribal firepower forced the use of cover, ground and covering fire, for, when caught unextended, Imperial casualties

³¹ *BA* LXVIII (1902), p 622; eg ed Maj Gen Maurice Moore’s *Diary* (1904), ed CG Moore-Smith *Autobiography of Lt Gen Sir Harry Smith* (1902); Lt Col Maude ‘Evolution of Infantry Tactics’ *USM* XXIV (1902), p 18; Col Verner ‘A Century of Fighting’ *MM* 82 (1900). Verner was a Rifleman, however, and not unbiased.

³² ‘The Use and Abuse of the Initiative’ *AR* I (1914), pp 5-7. His father had edited *Moore’s Diary*.

³³ *The Campaign in Tirah 1897-1898* (1898), p 24.

³⁴ Brig Gen Egerton *Hill Warfare* (Allahabad 1899), pp 1-2. In relatively benign terrain a brigade and supplies might extend over 5-6 miles; Table 16 shows pack transport’s inefficiency.

³⁵ Maj Callwell *Small Wars* (1899), p 254.

were often heavy.³⁶ Advances slowed as pickets had to move further out to counter long-range fire. This increased dispersal and made giving covering small arms fire harder. This in turn strengthened the tactical importance of artillery, a long-range weapon. Dispersal also required more subordinate initiative. Slower picketing delayed columns' progress, in turn demanding more food and longer transport-trains, themselves more vulnerable to modern rifles. Movement was slowed still further. Signalling was more necessary in view of the greater dispersion and broken terrain. These factors, which complicated tactics, when combined with the Campaigns' greater scale made staffwork more important. However, few pscs served on the staff in India and staff arrangements in Tirah were often chaotic.³⁷

The Campaigns Analysed

Several generals failed, the Khyber was abandoned temporarily, there were grave reservations about the performance of British relative to Indian units, despite the formers' magazine rifles, and, by Frontier standards, heavy casualties. The Army in India consequently suffered a shock. Henderson reported criticisms of COs' and company officers' 'leading,' implying defective initiative.³⁸ Critics denounced bad staffwork, poor staff selection, improvised formations and the use of over-large, clumsy divisions. They recommended standardising staffwork and formations and establishing an Indian staff college.³⁹ One Tirah brigadier, Kempster, was effectively dismissed and a divisional commander probably would have been, but he died first. Compared to the many stellenbosched from 1899, these numbers were

³⁶ Capt Slessor *The 2nd Battalion Derbyshire Regiment in Tirah* (1900), p 93.

³⁷ The Matabele used some in 1896, a few were used in the other 1897 campaigns, but their fire was tactically insignificant; Hutchinson *Tirah* pp 227-8 for the problems of attacking uphill against sangars containing riflemen; Callwell *Tirah* p 37.

³⁸ Col Henderson *The Science of War* (1905), pp 348-9. He cited *IDB 1896*'s qualified injunctions on initiative immediately beforehand.

³⁹ BePs 830/12, p 31; *BA XL* (1898), pp 258-9; 'Eyewitness' 'Tirah' pp 393-4. In South Africa similar criticisms were made of the corps-based organisation; *ANG XL* (1899), p 100. Slessor *Derbyshires* pp 62,66 suggests problems at 2nd Dargai. Maj Rodwell *Four Bangalore Lectures* (Lahore 1899), p 66 poor transmission of orders caused Haughton's death.

insignificant, but inferior British performance relative to Indian was not, as Col

Holdich, a Tirah veteran, recounted:

Time after time has [the jawan] assisted to cover a badly conducted retirement, and to help British regiments out of serious difficulties; nor is it ... beyond his ken that British regiments have been most severely shaken ... under ... fire.⁴⁰

Churchill warned on the Imperial implications, while articles are peppered with criticisms of poor performance during Tirah, though, by modern standards, they were veiled.⁴¹ Also, as Henderson warned:

there [on the Frontier] we may have to fight for our very existence... [I]n practicing hill tactics, we shall be preparing for campaigns which may decide the fate of England.⁴²

Many saw war with Russia on the Frontier as the most likely major threat that Britain faced. These pressures forced a searching re-evaluation of hill-warfare tactics and training. This was not just limited to tribal enemies.

The number of works on the Campaigns was unprecedented; four official histories, many specialist reports and private works resulted.⁴³ There was substantial newspaper coverage. Several correspondents later wrote books. Veterans, including 2 brigadiers, produced explicitly didactic works. Of the more junior commentators, Plowden later wrote on skirmishing, stimulated by Tirah, and Rodwell on scouts. Lectures, professional articles and changes to the Indian military education system supplemented the books. The whole represents the most substantial analysis after any 19th Century Frontier campaign, suggesting the anxiety aroused. This scale of analysis increased the probability that significant tactical change would ensue.⁴⁴

⁴⁰ RPs 7101-23-105 of 12/2/98, 7101-23-46; WO 279/9 p 83; L/MIL 3/1083 'Letter 45' for a CO's dismissal following misbehaviour during Tirah.

⁴¹ L/MIL 3/1079 Letter 30 of 24/2/98; Lt Churchill *The Story of the Malakand Field Force* (1899), p 298; *ANG XXXVIII* (1897), pp1012-3; *BA XL* (1898), p 125, Slessor *Derbyshires* pp vi-vii.

⁴² RPs 7101-23-105 25/11/97; Henderson *Science* p 352.

⁴³ Eg the histories, reports such as the artillery reports précised on L/MIL/7/10837 pp 6-11, L/MIL/7/15896 'M 3820' examining British health and discipline. Most columns prepared logistic reports eg L/MIL/17/5/1850-4; *Abstract of reports on magazine rifles used in operations in India and Egypt 1897-98* (1899).

⁴⁴ L/MIL/17/5/371 of 26/3/01 for Plowden's *Notes on Skirmishing* translated into Urdu; *Training for Native Infantry Scouts* (Lahore 1903).

Later hill-warfare manoeuvres held all over India complemented the analysis, with the best reported at Attock.⁴⁵ Most change occurred in India but Tirah affected training in Britain. Though commentators were mainly concerned with hill-warfare many of their recommendations also applied to conventional combat.

The Immediate Analysis

Analysis began during operations and reached the highest level. A formal enquiry followed the ambush of a retiring detachment. White, the CinC India, criticised the detachment's slow movement, its failure to withdraw by alternate companies and that there had been no covering fire. It: 'had straggled off anyhow,' thus suffering: 'serious loss ... by a ridiculously small number of Afridis.'⁴⁶ Officers from brigadiers to half-company commanders had failed to command. This and a similar incident caused General Lockhart, CinC TEF, to issue a memorandum stressing covering fire, mutual support, both recognising greater tribal firepower, controlled withdrawals, fieldcraft, use of ground and faster movement.⁴⁷ It also recommended extension to save casualties and artillery covering retirements. Despite its publication and retraining during operations, weaknesses recurred and special orders on protective tactics were issued on 11 December 1897.⁴⁸

Veterans assessed the tribesmen as formidable: '[o]ur foe was not a badly armed horde but a trained force of skilled fighting men, armed with Lee-Metford rifles.'⁴⁹ Lockhart remarked: 'we are opposed to perhaps the best skirmishers and the best natural shots in the world.' They:

appear to be as well armed as our own native troops, ...they shoot with remarkable accuracy and they are adepts at skirmishing ... There are many ... discharged officers and soldiers ... who doubtless impart military training.

Col Hutchinson described the Afridis as: 'first rate shots. Their ... skirmishing is

⁴⁵ BA XL (1898), pp 597-8; L/MIL/17/5/358 16/8/00 suggests their pan-Indian scope.

⁴⁶ L/MIL/7/15882; WPs 27B/1 of 22/11/97.

⁴⁷ WPs 38/11/40 'Withdrawal of 3rd Brigade 16/11/97;' Ibid 11/37 of 18/11/97.

⁴⁸ Yate *Haughton* p 188.

⁴⁹ *The Bugle* (KOYLI) XVIII (1/4/01), p 9.

quite extraordinary... their activity marvellous.' Pollock, a Frontier veteran, considered them:

excellent shots and the finest material for [LI] in the world; whose knowledge of hill tactics is excellent, who see faults and know how to take advantage of them, and from whom we have much to learn.⁵⁰

Churchill remarked: '[t]o the ferocity of the Zulu are added the craft of the Redskin and the marksmanship of the Boer'⁵¹ Hart, an ex-Tirah brigadier, commented that the Afridis: 'excel as skirmishers.'⁵² Lt Col Haughton attributed disproportionate Imperial casualties to: 'guerrilla tactics...and their being so well armed (especially with Lee-Metfords).' He noted that smokeless ammunition and long-range rifles had complicated tactics. Hamilton also highlighted these two factors. Afridi tactics emphasised sniping, skirmishing, covering fire, and fieldcraft, Imperial tactics based on volleys and close-order were consequently ineffective. Casualty-rolls show that injuries from swords and stones were more common in the Malakand. In Tirah most were gunshot-wounds, demonstrating that combat there was more advanced.⁵³ That Imperial combatants stressed that they were fighting well-armed ex-Indian Army veterans implied conditions approaching conventional combat. Thus the lessons of Tirah potentially applied to modern warfare. Praise for Afridi skirmishing, tactics which combined low-level initiative, fieldcraft and independent fire, suggests Imperial defects in these skills.⁵⁴

Retraining started during Tirah. The Green Howards were briefed on tactics before deploying, later training 60 'climbers.' The Sussex instructed 100 mountain

⁵⁰ L/P&S/7/97 5/11/97; Hutchinson 'Tirah' *JUSII*, p 242; Lt Col Pollock 'Notes on Hill Warfare' *JUSII* XXVIII (1898), p 137.

⁵¹ Churchill *Malakand*, pp 4-5.

⁵² *Reflections on the Art of War* (1901), p 342a; 'The Tactical Principles.... India' *JUSII* XXVIII (1899), p 193.

⁵³ L/MIL 3/1073 'Malakand Despatches' pp 11-16 analyses Malakand casualties, L/MIL/3/1082 Letter 94 lists Tirah casualties. Hutchinson *Tirah* p 230 notes that Afridi tactics had generally changed from rushes of swordsmen to sniping. But, as Meade emphasised, volleys and close-order tactics were effective against primitive tribal tactics, eg Churchill *Malakand* pp 228-9. But there are suggestions tribal assaults there were due to insufficient rifles, L/MIL/7/15866 'MFF Diary 20-21/9/97.'

⁵⁴ Yate *Haughton* pp 224-5; HamPs 1/2/24 Hamilton/Wilkinson 20/3/98. Chapter 3 analyses smokeless ammunition's effects.

scouts; most British units followed their example. One can deduce that these groups enjoyed greater initiative than the average company. The Ghurkha Scouts and 2 OXLI trained during operations.⁵⁵ This scale of retraining during operations was unusual. It does not appear to have occurred in the other 1897 Campaigns, suggesting both that Tirah was tactically harder and that Imperial performance there was worse. Emphasis on scout-training during Tirah suggests the new importance of open-order tactics.’⁵⁶

The Later Analysis

Introduction

Analysts examined firepower, manoeuvre, (generally involving tactical outflanking), and protection, (highlighting fieldcraft). Some scrutinised initiative, while several criticised *IDB 1896*, thus preparing the way for later changes caused by South Africa.

Firepower

The first lesson was the increase, both quantitative and qualitative, of tribal firepower. Hutchinson remarked:

In former days.....we have found them ...armed with ... a few Sniders and Enfields. The extreme effective range of the best of these weapons was barely 1000 yards, so that if the flanks of a marching column were protected by detachments pushed out half a mile... the column was fairly safe. But the Martini is effective up to *a mile* and the Lee-Metford up to *two* (sic).⁵⁷

Many Afridis now were as well-armed as the jawans, while tribesmen carrying Lee-Metfords were better. These weapons fired smokeless ammunition, thus facilitating fieldcraft. IA units, carrying black powder firing Martinis, were at a severe disadvantage. The Lee-Metford’s higher muzzle velocity meant a flatter trajectory, more chance of hitting and a longer range. This was a great advantage in mountains.

⁵⁵ Lt Col Franklyn ‘Tirah’ *GHG* VII (Aug 1899),pp 66-9; *Ibid* (Jun 1900),p 51; *BA XL* (1898),p 467; ‘From Our Own Correspondent’ ‘The Tirah Expeditionary Force’ *95 XIV* (Apr 1898),p 54; *BA XL* (1898),p 358; COLPs pp 10,13.

⁵⁶ The Malakand and Tochi were smaller, shorter operations so were not equivalent to Tirah. Retraining during the 1895 Chitral Expedition has not been traced, but tribal firepower was less there.

⁵⁷ Hutchinson *Tirah* pp 225,227. Long columns of pack animals were large, slow targets.

Lt Col Martin deduced that tactics were related to enemy weapons, therefore to defeat rifle-armed foes demanded greater extension, fieldcraft, covering fire and outflanking.⁵⁸ Martin's deductions are explored later, but evidence that contemporaries saw that increased firepower caused tactical change is important.

IDB 1896 did not emphasise the growth of defensive firepower or the resulting need for covering fire.⁵⁹ A consequence of greater tribal firepower was that most commentators stressed fire from successive positions both in attack and withdrawal to cover movement:

Perhaps the most important exercise in our training is the covering by fire of the ... assaulting unit, without which diversion the attackers are bound to lose heavily.⁶⁰

Rodwell noted flat-trajectory fire made hilltops poor defensive positions for riflemen as steep slopes allowed the enemy to approach them in dead ground. Plowden recommended that: 'a heavy fire from artillery or...rifle fire must be kept up...to the last moment' to cover attacks.⁶¹

Volley, the basis of fire-tactics and fire-discipline, were, as General Blood, Commander MFF, stressed: 'not the thing for this work.'⁶² Churchill described how:

[t]ribesmen ...dart from rock to rock ... [B]efore the attention of a section could be directed to them and the rifles aimed, ... the target would have vanished ... Better results were obtained by picking out good shots and giving them permission to fire.⁶³

But independent fire demanded individual initiative, snapshooting and LI-style skills, for which British troops were untrained.

Captain Mead, an IA musketry-instructor, made the most detailed examination of Imperial marksmanship on the Frontier. He criticised *MRs* for being:

⁵⁸ *Mountain and Savage Warfare* (Allahabad 1899), p 1. Operational analysis from the Radfan campaign suggests that the minimum engagement range in mountains is 600 yards.

⁵⁹ *IDB 1896* pp 66-7 implies covering fire; it hints at increased defensive firepower p 137.

⁶⁰ Pollock 'Notes on Hill Warfare' *JUSII* XXVII (1898), pp 140-1 *MW* p 11; Gen Gatacre 'A Few Notes on the Characteristics of Hill-Fighting' *JRUSI* XLIII (1899), p 1072; Plowden *Battalion* p 15.

⁶¹ *Tactical Lectures* (Lahore 1903), pp 42-4, given 1899, possibly officially; Glossary; Chapter 3

⁶² WPs 38/11/27 Blood/White 7/10/97.

⁶³ Churchill *Malakand* p 285.

based on the results of wars of other countries; whilst our own experiences, though surely more valuable as being ... more recent ... have been totally neglected.

This suggests 1870's persisting influence. Mead had studied Frontier operations carefully. He remarked:

Our inferiority ... in skirmishing and firing appears to be generally admitted...it seems almost as if it was accepted as natural, and as regards...shooting, without a remedy.⁶⁴

Mead disagreed, blaming unsuitable training, citing Swat and Omdurman, where, against massed enemies, Imperial shooting was good. His point on skirmishing suggests contemporary recognition of its importance. Mead blamed the Figure of Merit, ammunition shortages and overregulation for poor marksmanship in Tirah. He recommended training: 'in firing at vanishing and moving objects...at unknown distances ... under conditions which require great celerity in taking ...aim.' South Africa later emphasised snapshooting, involving similar skills and necessary for the reasons that Churchill suggests above.⁶⁵ Mead saw Frontier and conventional war as demanding similar fire-tactics and he emphasised firing while skirmishing. This naturally demanded individual initiative.

Machine guns were effective at the Malakand, though less so in Tirah where there were few massed targets. Franklyn disliked his gun; it attracted spectators and staff officers, both equally objectionable, though the Derbyshires' was: 'beyond all praise.' Several trials occurred during Tirah. The trials officer stressed machine guns' ability to cover attacks, while Captain de la Bere emphasised their ability to protect withdrawals. Both imply increased tribal firepower, while the fact that two articles were written on machine guns' performance on the Frontier suggests considerable

⁶⁴ 'Notes on Musketry Training of Troops' JRUSI XLIII (1899), pp 234,234-6,237; Mackinnon *Volley*, p 10.

⁶⁵ Glossary; Chapter 4, Table 17.

interest in them.⁶⁶

Greater tribal firepower combined with longer ranges, characteristic of mountain warfare, demanded more artillery. Some 21 batteries saw service in 1897-8, and, for the first time in recent Frontier fighting, field artillery, more powerful than mountain, deployed in mobile Frontier operations. This was partly because there was insufficient mountain artillery to support all the 1897 operations, but field artillery's greater firepower proved valuable. Artillery tactics altered with batteries: 'employed in brigade divisions with greater effect than if they had fought as individual units.'⁶⁷ Concentration was needed to counter increased tribal firepower. Its use suggests conditions approaching conventional warfare. In one action the GOC RA had controlled 6 batteries whose fire: 'completely drove off the enemy.'⁶⁸ Rodwell and Hutchinson agreed on the value of concentrated gunfire, implying that conventional tactics could apply on the Frontier. In turn some might appreciate that the reverse could apply. Rodwell emphasised that shelling should continue for as long as possible to protect attacking infantry from enemy fire. However concentration of fire and its synchronisation with other arms demanded better coordination and staffwork.⁶⁹ The Indian IGRA cited another innovation:

on many occasions during [1897-8] batteries fired for long periods over the heads of infantry. It repeatedly happened during Tirah.... [T]he most remarkable instance occurred during the Tangai Pass action ...when the 10th Field Battery fired 476 rounds...over the heads of.... advancing troops.

Fire was sometimes within 100 yards of the assaulting infantry. Overhead fire during attacks had been rare hitherto. As with machine guns, artillery was probably more effective at causing casualties in the other 1897-8 operations, but in Tirah it

⁶⁶ Surgeon Major Beevor 'Episodes of the Scottish Regiments in the Indian Frontier War' *SL* (1898), p 406; Churchill *Malakand* p 109; 95 XIV (4/98), p 51; Capt Carthew-Youston 'Machine Guns' *JUSII* XXVIII (1898), p 217; *L/MIL/7/4823* Letters 128&135; Capt de la Bere 'With Machine Guns in Tirah' *USM* XX (1899), p 168. Slessor *Derbyshires* p 159.

⁶⁷ *L/MIL/7/10139* 31/5/00.

⁶⁸ Capt MacMunn 'Artillery in the Indian Campaigns of 1897-8' *PRAI* XXVI (1899), p 235.

⁶⁹ Lt Col Rodwell *Tactical Lectures* (Lahore 1903), pp 46-7 citing Lt Ballard 'Diary of the 10th Field Battery RA with the Malakand Field Force' *PRAI* XXV (1898); Hutchinson *Tirah* pp 236-7.

neutralised enemy fire, saving friendly lives.⁷⁰

1897-8 revealed that the current mountain gun's shells were too light to inflict serious damage and it was too short-ranged to defeat rifle-armed foes.⁷¹ Some felt that howitzers were required; Tirah had shown that guns were unable to search into cover. Methuen concurred but emphasised that they had neutralised enemy fire.⁷² For the first time in India the whole RA organisation, CRAs, artillery staffs and ammunition columns, deployed on operations, giving valuable lessons.⁷³ Service journals criticised British neglect of artillery in training. The Frontier had shown its increased power. One noted the: 'astonishing revelation of the value of field artillery' in Tirah.⁷⁴ 1897-8 began reawakening the British to the power of artillery, an important lesson for conventional war.

Mobility and Manoeuvre

Cavalry had little value in Tirah, though influential cavalrymen: Baden-Powell, Churchill, Gough and Birdwood served there. But the arm was effective in the other 1897 Campaigns.⁷⁵ The Indian IGC recommended arming cavalry with Lee-Metfords to match better tribal rifles, recognition of firepower and dismounted tactics' importance. Churchill stressed reconnaissance and blending dismounted fire and shock tactics.⁷⁶ Later this combination was to dominate British cavalry tactics, though 1899-1902 was the prime factor in causing the change. All that can be

⁷⁰ L/MIL/ 7/10837 pp 13,10; overhead fire was used in 1895, HC Thomson *The Chitral Campaign* (1895),p 164; Churchill *Malakand* pp 291-2; Maj May 'The Problem of the Attack' (AMS1898), p 11 for overhead fire's previous rareness; Chapter 4.

⁷¹ Maj Gen Headlam *The History of the [RA] III* (Woolwich 1940), pp 115-6.

⁷² Maj Bryan 'The Organisation of Howitzers with Field and Mountain Artillery' *USM XXI* (1900),p 488; MePs 'Dargai' p 6.

⁷³ Headlam *RA III*, p 114.

⁷⁴ *BA LIX* (1897),p 482; *NAA* (21/1/99), p 436.

⁷⁵ Lt Col Ramsay '... Warfare on the Frontiers...' *JUSII XIX* (1900),p 94; Lt Gen Baden-Powell *Indian Memories* (1915),p 208; Gen Farrar-Hockley *Goughie* (1975),p 32. These two secondary sources simply show the subjects' presence in Tirah. The latter cites contemporary material; BPs 6707-19-124-32 letter 1/11/97.

⁷⁶ Capt Nevill *Campaigns on the North-West Frontier* (1912),p 253; *JUSII XXVII* (1898),pp 259-262; *Malakand* pp 256-7.

concluded is that the Frontier's influence may have aided this development.

Tirah's most substantial mobility lesson was to emphasise tactical outflanking. This was a relatively new feature in colonial warfare which previously had stressed direct frontal attack. This again suggests that Tirah had lessons for conventional combat.⁷⁷ Hutchinson remarked:

I simply refer to [Second Dargai] to accentuate the fact that a direct attack, unsupported by any demonstration against a flank, must always be so costly... that it should never be resorted to if there is any way out.

The Germans later blamed many of 1899-1900's failed frontal attacks on the baleful tactical influence of colonial warfare. Tirah taught differently.⁷⁸ Plowden deduced that extra enemy firepower meant that: '[a] flank must be turned,' continuing:

In these attacks it has become an axiom on the frontier to adopt the same methods of approaching the position as the tribesmen ... This is, for the firing line to creep singly or in twos and threes from cover to cover. The British soldier is not taught this species of skirmishing, but its importance cannot be overrated, and even on level grounds in the plains the principles...should be carefully taught.

This was very similar to Boer stalking tactics. Plowden saw that training would need overhauling if more sophisticated tactics were to be adopted. Lt Col Martin commented that rifle-armed foes demanded that frontal and outflanking attacks should be combined.⁷⁹ British readiness to learn from the enemy suggests the importance of improving tactics.

Another mobility lesson was the critical importance of transport. Weak animals, insufficient vets and poor staffwork had hampered both mobility and the TEF's readiness. These faults recurred in South Africa with even worse consequences.⁸⁰

⁷⁷ Maj Callwell *Small Wars* (1899), p 69, though colonial warfare demanded mobility this was mainly logistic rather than involving speed and tempo. Once troops were committed to action, direct attack was stressed; Chapter 5.

⁷⁸ 'The Story of Tirah' *JUSII* XXVII (1898), p 241; Trans Lt Col Waters *GEOHWSA I* (1904), p 28.

⁷⁹ Lt Col Plowden 'The Battalion on the Frontier' *OXLIC* 1899 p 256; *Martin Mountain* p 1.

⁸⁰ *RCTTEF* (Calcutta 1899), pp 46, 50, *Report [AVD] Mohmand, Malakand and Buner Field Forces* (Calcutta 1899), *Report [AVD] Tirah Expeditionary Force 1897-98* (Calcutta 1899).

Protection

Tactical centralisation meant that initially formations were tight; soldiers deployed 1-2 paces apart while skirmishing and at ½-1 pace in extended-order.⁸¹

This made it hard to use ground; furthermore many soldiers were untrained in fieldcraft so cover was often used poorly. Henderson recorded a veteran's views:

Attention should be particularly directed to the training of infantry in shooting from behind cover accurately and rapidly without exposing themselves...[T]he average British infantryman usually exposes half his body... and frequently puts himself into such a position that he can neither aim accurately nor shoot quickly.⁸²

Snipers frequently inflicted heavy casualties on bunched troops, suggesting that firepower had been underestimated.⁸³ Lockhart's memorandum therefore stressed cunning, or what now would be called fieldcraft, invisibility and dispersion.

Significantly the post-Tirah manual, *MW 1900*, emphasised using ground for protection far more than *IDB 1896* had done.⁸⁴

The need to pass long transport trains through defiles and to safeguard camps reinforced the importance of protection. Initially commanders had not taken into account long-range modern weapons when siting pickets. Consequently during Tirah pickets pushed further out to counter their fire. But increased firepower allowed picket-strengths to be cut.⁸⁵ Thinning-out meant that the remaining troops could use cover better and were less vulnerable to enemy fire.⁸⁶ Signalling became more important over such extended distances, Franklyn remarked: 'I always sent out a trained signaller and lamp with every picquet.' Unlike in conventional warfare, pickets stood fast when attacked, hence they fortified their positions.⁸⁷ At night they

⁸¹ Pte O'Connor 'With the Malakand Field Force' *QOG* XVII (1899), p 1455, but his unit were not veterans like the PFF; Capt Edwards 'Recent Frontier Warfare' *JUSII* XXVIII (1898), p 361.

⁸² Henderson *Science* pp 350-1. He apparently had served on the Frontier and South Africa.

⁸³ L/MIL 3/1087 Letter 164 p 19.

⁸⁴ Capt Walters *Operations of the [TEF] 1897-8* (Simla 1900), p 104; Plowden 'Battalion' p 259. Withdrawing was dangerous as it generally involved downhill movement with the tribesmen having the advantage of height. They had a moral and physical advantage, *MW* (1900), pp 2,37,8-9.

⁸⁵ Capt Shadwell *Lockhart's Advance Through Tirah* (1902), p 155.

⁸⁶ Edwards 'Frontier Warfare' p 358.

⁸⁷ Col Franklyn 'With the Yorkshire Regiment in Tirah' *GHG* VIII (Jun 1900), pp 49-52.

were largely dependent on their own resources, thus putting a premium on their commanders' initiative.

The Frontier demanded constant alertness; unwary units suffered.⁸⁸ Churchill recommended that officers should dress like their men and carry rifles; he recounted the classic Frontier adage of avoiding white stones and officers. Both attracted fire. Commanders stressed fieldcraft and using cover; but the IA's rifle, the Martini, fired black powder ammunition. A veteran noted the results:

Nothing could be more marked than the enormous disadvantage at which troops using black powder work as compared with those using cordite. Time after time did we see admirable skirmishing or stalking ... simply given away by the first round fired, and it is no exaggeration to say that a considerable percentage of the casualties incurred by the native troops were due to this cause alone.

This suggests that some Indian units had better fieldcraft training than British troops. Fieldcraft and firepower were reassessed during Tirah. In consequence, the Ghurkha Scouts, the troops most dependent on good fieldcraft, were hastily issued with Lee-Metfords. This suggests the new importance of fieldcraft. However their role also required more firepower.⁸⁹

Initiative on the Frontier

Low-level initiative is important for later tactical developments and is therefore analysed separately here. Tactical conditions in Tirah particularly, representative of modern warfare's dispersion, demanded that all ranks showed initiative. Officers could no longer control, while juniors, separated from superiors, had to act independently. An Infantry CO contrasted:

In Tirah a wily foe, armed with the latest breechloader ... opposing to disciplined numbers his better knowledge of the ground, [and] an inimitable

⁸⁸ *IDB 1896* pp 156-7; *Rodwell Bangalore Lectures* pp 14-5; Lt Col Thomsett *With The Peshawar Column* (1899), p 126; for the continued importance of vigilance on the Frontier, Lt Col Masters *Bugles and a Tiger* (1956), pp 222-4. Writing post-1945 of 1930s Frontier warfare, he emphasised its value as training in vigilance and fieldcraft for major war.

⁸⁹ Churchill *Malakand* p 289, FM Slim *Unofficial History* (1959), p 112, this advice is a Frontier classic; OPs p55; L/MIL/7/15886 F 21. They were the first Indian troops to be so armed.

talent for skirmishing... In Egypt ... few beneath the rank of Brigadier were called upon to show aught but courage....In Tirah, no subaltern could tell but that ... the lives of his men might not depend on his own initiative.⁹⁰

Methuen, judging from Tirah, criticised British units': 'lack of ... initiative,' noting later that IA officers were: 'more habituated' to showing it.⁹¹ Others shared Methuen's opinion, but even so some Indian units were hide-bound:

We went into Tirah a "drillbook" regiment. We came out of it with the firm conviction that the drillbook, regarded as a traveller's companion for Tirah, was considerably out of date. The principle which we found of greatest importance was ... the frequent necessity for initiative action by subordinate officers.⁹²

Some commentators analysing the campaigns hardly mentioned initiative.

Generally they were either Indian or Frontier veterans, who probably saw it as inherent in hill-warfare. Instead they stressed fieldcraft, skirmishing, scouts and independent fire, all demanding initiative, rather than referring to it directly. There were, however, exceptions. Blood exemplified this indirect approach in criticising a British unit:

our officers and men have much to learn in regard to ... seeing to mutual support, and to the ground, when they get away from directing authority. All the mishaps that have occurred here are traceable to these points-which is brought out by the superior smartness of the enemy. Our volley-firing also is not the thing for this work.⁹³

These failures suggest poor initiative, confirmed by Blood's reference to: 'directing authority.' Volleys depended on control and close-order, the negation of initiative and fieldcraft. Blood also implied that training was defective and he felt that British troops lacked tactical cunning, ie initiative. Blood later advocated introducing the 4-company battalion, as, with the current 8-company unit, when officers reached positions of power they had become inert. He also criticised volleys as too

⁹⁰ *MW* p 11; *GHG* VII (May 1899), p 23.

⁹¹ *RCWSA Evidence* II Q 14268, confirmed by McPs 'Tirah File' 'Dargai' p 6.

⁹² Maj Callwell *The Tactics of To-Day* (Edinburgh 1900), p 133; OPs p50. Ormsby was a Gurkha.

⁹³ WPs 38/11/27, Blood/White 7/10/97.

mechanical.⁹⁴

Lockhart's Memorandum implicitly criticised poor initiative by condemning over-close formations. Its recommendations on withdrawal also demanded initiative, though it did not mention this explicitly.⁹⁵ Similarly Egerton's *Hill Warfare* tackled initiative indirectly by stressing scouts. Pollock's *Notes on Hill Warfare* criticised set-pattern formations and mechanical firing, but Pollock: 'having spent over twenty years on the frontier,' probably did not appreciate that tyros did not understand initiative's importance. Plowden did not comment on initiative directly, instead he stressed skirmishing, independent fire and use of ground. All required initiative.⁹⁶ Though Plowden was not a Frontier veteran, he was an LI officer and thus was more attuned to delegation. He commented later:

Tirah and South Africa ... proved conclusively that tactics which depend on the soldier thinking and acting for himself are those best calculated to ensure success.⁹⁷

Hutchinson, a Gurkha, condemned set-piece formations and *IDB 1896*'s rigidity for destroying initiative, commenting that in mountains:

[i]t is most necessary, therefore, for every officer to know beforehand what is the "general idea," so that even when isolated ..., he may intelligently co-operate. In no other kind of warfare will company and section commanders find such unlimited scope for ... individual initiative ... [E]verything may depend on [their] judgement and decision.⁹⁸

General Hart, a Tirah brigadier, stressed:

[t]he difficulty of exercising command in mountain warfare is great... much reliance must be placed on the intelligence, initiative ... and brave leading of subordinate officers.⁹⁹

Major Pearse recommended: 'the intelligent cultivation of [the soldier's] powers, and ... encouragement of individual skill,' seeing the Gurkha Scouts as the ideal. Pearse

⁹⁴ MEPs 'Tirah File' Blood/Methuen 17/5/98; Glossary.

⁹⁵ Walters *Tirah* p 104.

⁹⁶ *JUSII XXVII* (1898), pp 146-7; 137; 'The Battalion on the Frontier' *OXLI* (1899), pp 241-71.

⁹⁷ *OXLIC* (1900), p 283.

⁹⁸ *Campaign*, pp 231, 234-5.

⁹⁹ *Art* pp 342f, 342d.

was neither LI nor a Frontier veteran and was writing in Britain, perhaps suggesting that initiative appeared more significant there.¹⁰⁰ Hamilton underlined: 'we must ... develop the individuality & skill of ... men ... with the natural aptitude ... for scouting.'¹⁰¹ This demanded initiative. A journal emphasised that in hill-warfare: 'small bodies are necessarily detached so company officers must be prepared to assume responsibility,' implying that they often had not.¹⁰² Martin, a Gurkha and Tirah veteran, recommended that junior commanders acted: 'on their own initiative.' He also emphasised skirmishing, scouting and that companies were the tactical unit. All implicitly recognised delegation, while his last point was an important South African lesson. General Gatacre warned:

A ...commander must recognise... once on the hills, he must ... relax control of his regiment, which owing to accidents of the ground will pass to.... the company leaders. When this takes place he will feel, perhaps for the first time, the immense importance of so training his officers... Above all we require officers, by careful teaching, to extract ... more intelligence from their men in ... company training.'

Intelligence implies initiative as does Gatacre's emphasis on company training.¹⁰³

Hitherto battalions had been the tactical and training unit, inhibiting low-level initiative. Lt Col Franklyn, a Frontier novice, made some of the most explicit deductions:

the tendency of warfare on the [Frontier] is to bring out the individual qualities of each soldier and to demand his employment as an individual ... It was soon found that volleys are innocuous against a widely extended foe...[T]he great lessons of ... Tirah ... were decentralisation and the necessity of ... refurbishing the almost forgotten art of skirmishing.¹⁰⁴

Franklyn's last point suggests the importance of skirmishing in decentralised combat, and that contemporaries linked skirmishing and initiative. A military journal noted that the tactical unit in Tirah were companies, in the Sudan brigades. This suggests

¹⁰⁰ 'Sharpshooters' *JRUSI* XLIII (1899), p 1245.

¹⁰¹ HamPs 1/2/24 20/3/98.

¹⁰² 'Mountain Warfare' *LX* (1898), p 289.

¹⁰³ *Mountain and Savage Warfare* p 2; 'Characteristics', pp 1070, 1072.

¹⁰⁴ *GHG* VIII (Jun 1900), p 52.

that Tirah's tactical conditions required substantially more low-level initiative.

Furthermore as companies became the Infantry tactical unit after 1902, it suggests Tirah's greater relevance to modern warfare.¹⁰⁵ AHQ India later realised that the wing system was impractical in the face of breech-loading rifles as it was too centralised, stunting the development of initiative. Instead double companies were needed.¹⁰⁶

Tirah and LI

Some commentators argued for LI after Tirah. This suggests the switch towards delegated tactics, for their tactics were founded on initiative and extension. Tirah also highlighted the importance of scouts and skirmishing, both LI skills. Hutchinson made the strongest case, commending the Gurkha Scouts whose:

careful preparation in peace-time had made them hardy, active, intelligent, self-reliant, and resolute ...[T]hroughout the expedition, under the bold leading of their officers, they were conspicuous by their dash and daring.

Consequently he recommended reforming Light Companies in battalions. He saw them primarily as more effective combatants rather than as specialist scouts. This suggests poor Infantry tactical standards in dispersed combat.¹⁰⁷ Pearse, writing in Britain, also recommended forming bodies of scouts. He argued that, as reconnaissance was the most demanding combat task, special training was essential for it. He cited the Boers in 1881 and the Gurkha Scouts to stress sharpshooters' value both as scouts and in: 'field duties which require special training, superior intelligence, personal activity, self-reliance and skill in shooting.' Again Pearse, like Hutchinson, suggests their importance as combatants, implying that general infantry standards in open-order tactics were poor.¹⁰⁸ Pearse was not an LI officer so his

¹⁰⁵ LXI (1898), pp 736-7.

¹⁰⁶ L/MIL 3/1102 Letter 212 of 21/12/99 p 3. South Africa may possibly have exerted influence, but given the slow process of staffwork and that India's most recent, direct experience of such weapons was in Tirah, it is likely that the latter was decisive, Glossary.

¹⁰⁷ Glossary; Hutchinson *Tirah* pp 229,239; Ibid p 240.

¹⁰⁸ 'Sharpshooters' *JRUSI* XLIII (1899), p 1245.

article suggests growing recognition in Britain of LI skills' importance and of the wider applicability of Frontier lessons. Others recommended scout and shikar training as providing excellent instruction in these skills.¹⁰⁹

Major Yate, writing on Frontier warfare, emphasised the role of LI in hill-warfare and their special tactical skills. His article began in America, the British LI's cradle, commended 13th LI's hill-fighting skills and deduced that systematic training was essential for such combat. He praised LI skills and saw the old Light Company standard as desirable. He argued that the average soldier had neither the fitness nor mountaineering skills necessary for detached combat in hill-warfare. Yate concluded: '[g]ood recruits must be well paid, and without good recruits there cannot be a good Army.' Roberts also was to emphasise this later. Yate also argued that *IDB 1896* had insufficient guidance on hill-warfare.¹¹⁰ Martin stressed that scouts should be trained like LI, who, he noted, did far more skirmishing than other infantry. He commented that *IDB 1896* had: 'practically no instruction on this subject.'¹¹¹

The degree of emphasis on skirmishing and LI suggests that tactical conditions had changed, that Infantry training was defective and that *IDB 1896* did not match these new conditions.

Training and the Manuals

Commentators felt that many units had been poorly prepared for Tirah. Partly they attributed this to the fact that there was no comprehensive manual of Frontier warfare. Also *IDB 1896*'s general principles of close-order and volleys were inappropriate to hill-warfare. Hutchinson, the Indian DME and thus able to influence training, was scathing.

Regiments new to ... mountain warfare, which have only practised drill-book methods of attack and retirement, find themselves seriously handicapped.

¹⁰⁹ Eg Capt Burton 'Shikar as Training for Scouts' *JUSII* XXVIII (1899). That it was a favourite officer recreation did not lessen its training appeal! It was also stressed after 1902.

¹¹⁰ 'North-West Frontier Warfare' *JRUSI* XLII (1898), p 1172; *Ibid* pp 1180, 1182, 1192; Glossary.

¹¹¹ *Mountain* pp 2-3.

He condemned *IDB*'s direction that:

“retirements should usually be conducted in *quick time*” and that “in moving from cover to cover *an upright position* must be maintained”! ...If these are the only methods constantly practised on cantonment parade-grounds, it must be impossible to shake them off at a moment's notice.

This suggests that, even in India, training was often stereotyped. Hutchinson felt that *IDB 1896*'s: “‘attack formations’ were entirely inapplicable.’ This was unfair as it forbade ‘normal’ formations, but Hutchinson's strong criticisms can only have advanced the adoption of more decentralised tactics.¹¹²

At lower levels officers found that *IDB 1896* inhibited common-sense.

Ormsby, a Tirah veteran, recalled: ‘[the] first day on which we ventured to disregard the directions of the Drill Book about retiring in quick time;’ consequently his troops escaped unscathed. Disobedience caused him considerable trepidation, but later the rest of his battalion conformed.¹¹³ This suggests how Tirah helped to inculcate flexibility.

Many Tirah veterans stressed the need for realistic training delegated to sub-units. Pollock urged:

Take every opportunity of exercising your men in firing at unknown distances: nothing trains men for war so much ... [A] hillman is not a white target ... nor does he even at 800 yards show even a mark as large as a third class target... Train your men in peace to the manoeuvres they will have to perform in war. Forms of attack are very good in their way, but they won't do against hill enemies.¹¹⁴

His last comment again implies that ‘normal’ formations were still common.

Mead recommended improving training and outlined the changes which Col Hill, AAG Musketry India and an ex-Tirah brigadier, had proposed. These included less emphasis on volleys, itself encouraging extension and initiative, and more

¹¹² *The Campaign in Tirah 1897-1898* (1898), p 129; *MW 1900* stressed speedy withdrawals p 12.

¹¹³ *OPs* p 30; Slessor *Derbyshires* p 44 also stressed *IDB 1896*'s inappropriateness.

¹¹⁴ ‘Hill Warfare’ *JUSII XXVIII* (1898), pp 146-7; Slessor *Derbyshires* p4 agreed that training had been stereotyped hitherto.

practical shooting.¹¹⁵ Hart, Mead's Chairman, another ex-Tirah brigadier, urged realistic training delegated to COs. This would have encouraged initiative. Gatacre also advocated practical training including field-firing and fieldcraft decentralised to companies. Decentralisation would have developed initiative. Plowden trained his battalion in skirmishing and fieldcraft after Tirah.¹¹⁶

This contemporary emphasis on improving training suggests that hitherto it had been poor and over-centralised, as Hart suggests. Criticisms of *IDB 1896* probably aided tactical change in Britain in 1899. The decentralised training which many recommended was better fitted to modern warfare and would have developed initiative.

India's Reaction to Tirah

This section covers the changes which the 1897-8 Campaigns caused in India. It may be argued that these were irrelevant to the British Army. But the Army in India had a substantial British element; interchange of personnel between British and Indian-based units was common and many Tirah veterans fought in South Africa with their linked British-based battalion. The next sections examine the response and show how it affected both tactics and weapons.

Curzon commented that 1899-1901 saw: 'special activity in remodelling and improving armament, equipment, mobilization and defences'. Not all of the resulting actions derived from the Frontier, but he emphasised that:

[i]n 1897 the army (sic) was engaged in a series of ... campaigns.... in which ... numerous defects and shortcomings were laid bare, and the military administration is now desirous that the army.... shall profit by the lessons.¹¹⁷

The greatest effect was on firepower, but mobility was carefully examined, largely in the context of logistics and animalmastership. Tirah had demonstrated that:

¹¹⁵ Mead 'Musketry' pp 245, 259.

¹¹⁶ 'Hill-fighting' pp 1068-70, 1075-6; 'Skirmishing' pp 289-91.

¹¹⁷ *The Indian Army* (Oxford 1907), pp 35-7; L/MIL/7/10139 'Reorganisation Artillery' 2/11/99 p 2.

a small fully equipped force which can act at once and strike sharp, prompt blows, is more efficient, and far more economical than a large army that can only take the field after months of preparation.

This suggests the importance of tempo, critical in manoeuvre.¹¹⁸ Changes to protection are covered in the Training Section below, as developments in fieldcraft were most visible in training.

Firepower

The 1897-8 Campaigns were an important factor in India's rearmament proposals. The most significant was reequipment with smallbore rifles. Tirah had revealed the Martini's growing inferiority to tribal weapons. Many were worn out and their black powder ammunition impaired fieldcraft. Other changes included provision of 58 machine guns and new mountain guns.¹¹⁹ Machine guns had been trialled during the 1897-8 Campaigns. Had they been ineffective then, it is unlikely that this increase would have been recommended. India's demand for more artillery was:

given additional weight from [1897-8].... The part played by...mountain batteries against frontier tribes is one of great and increasing importance...Our superiority in small arms is ...rapidly disappearing while ...the power of combination and tactical efficiency of the tribesmen is increasing. Under these circumstances, we must, in the future, rely largely on ...artillery.¹²⁰

White wished to raise the proportion of guns from 1.93 per 1000 men to 4 to reduce casualties and accelerate operational tempo. Significantly he recommended European norms as his desired goal. This suggests tactical transfer from conventional to Frontier warfare, recognition that the latter was becoming harder and therefore conversely that Frontier lessons might apply in conventional combat.¹²¹ White's point that more artillery would accelerate combat is valid as he did not anticipate the

¹¹⁸ L/MIL/17/5/1850, 1851, 1852, 1854, 1856 for commissariat-transport reports, L/MIL 3/1090 Veterinary Report Tirah; L/MIL 3/1090 'Preliminary Report Transport Co 1898.' Tirah inspired this Committee which later influenced the transport system in 1909, L/MIL/17/5/1617 p 405; Chapter 5.

¹¹⁹ OPs p55; L/MIL 3/1101 'Proposals to Increase Army Efficiency.'

¹²⁰ L/MIL3/1079 Letter 31, 24/2/98, p 2.

¹²¹ Ibid, Enclosure 2, AG/GOI 3/1/98.

tribes deploying it.¹²²

Dargai had shown that concentrated artillery fire was needed to support infantry in the face of improved firearms. But:

[t]he full effect of artillery fire... can not be produced by the casual grouping of batteries ... even at the beginning of a campaign; the brigade division should be a permanent unit.¹²³

Britain was also changing to permanently-organized artillery units, so India did not alter just because of Tirah, but doubtless the latter's experience aided reform in India.

Training

Tirah had shown that current training was inadequate for decentralised fighting. Possibly this had already been appreciated as White had sent Hutchinson, the Indian DME, specifically to Tirah to improve hill-warfare education.¹²⁴ In 1898 a *Syllabus of Instruction in Mountain Warfare* was issued. This included large-scale attacks and withdrawals, suggesting that conditions approaching conventional warfare were anticipated.¹²⁵ The enemy was to be specially selected to represent an 'active' force, while in company training scouts were to be chosen. 'Active' suggests dynamic and thus realistic training. Its stress on company training implies decentralisation from battalions and therefore more scope for initiative. That company scouts were to be trained suggests that Hutchinson's ideas on scouts and LI-style skills were being implemented.

Tirah inspired hill-manoeuvres all over India. The best reported were held at Attock.¹²⁶ The 1899 Attock Manoeuvre Instructions, issued to participants beforehand, recommended controlled, independent fire rather than volleys. They saw

¹²² When one side is superior in artillery, this statement is correct, though there are logistic caveats; but when there is a mutual, equivalent increase of artillery, the likely result is lengthy attrition eg 1915-17.

¹²³ LMIL/7/10139 M5463/1900 Military Dept 79/1900 31/5/00; India's request to form brigade divisions effectively antedates South African lessons, given lengthy preliminary staffing.

¹²⁴ LMIL/7/15867 F10A of 27/9/97.

¹²⁵ USG (15/10/98), p 834. 2nd Dargai was an example.

¹²⁶ LMIL/17/5/358 No 528 16/8/00 shows they occurred in Bengal. Others took place at Dalhousie and Quetta.

a suitable formation for scaling hills as scouts leading, followed by an extended line with supports close behind. If an attack was decided on, infantry and artillery fire would cover it, while outflanking and frontal action were to be combined. This recognised greater tribal firepower and more conventional tactics. They emphasised that depth detachments would protect retirements, showing the value of covering fire.¹²⁷

Commanders' suggestions from the manoeuvres were carefully recorded, indicating keenness to learn. Commanders emphasised the importance of scouts and signalling. The former suggests the greater importance of dispersed tactics and more attention to instructing individuals, the latter greater extension. The Attock Manoeuvres included field-firing and conventional attacks, though hill-warfare predominated. Tactically the main criticisms were bunching, poor fieldcraft, skylined soldiers, bad reconnaissance, and inadequate covering fire. Batteries leapfrogged during the manoeuvres; previously they had advanced simultaneously so as to minimise CB. Leapfrogging in contrast ensured that covering fire was not interrupted.¹²⁸ All were valuable lessons for conventional war.

The 1900 Attock Hill Manoeuvres were equally carefully recorded. Tactical guidance now recommended advancing on broader frontages to develop more fire and to prevent outflanking. No reason is advanced for the change, though similar formations were used in South Africa. Criticisms were tart, often involving overexposure, bunching and unwariness, while the comment: '[t]his day was instructive ... it showed many faults' suggests readiness to learn from mistakes. The manoeuvres included field firing; during it Indian units were praised, but a British battalion's slowness, poor covering fire and bad fieldcraft were excoriated. All these

¹²⁷ DPs 7810-106-40 'Report on the Attock Manoeuvres March 1899'; Ibid pp 58-63; Denning issued his own tactical notes, (DPs 7810-106-39), suggesting the manoeuvres' importance.

¹²⁸ Ibid pp 13-14; pp 14-5; pp29,43-5; pp 37,39; p 41; p 33; Chapter 3, Glossary.

points were very relevant to conventional warfare. Again the evidence suggests that IA units were better trained than British battalions. The subsequent report recommended improved field training, scouts, and signalling.¹²⁹

In summary the Attock manoeuvres appear realistic with many lessons for conventional warfare. The obvious care taken suggests the importance of improving tactical performance. Much attention was paid to maximising firepower and to stressing both infantry and artillery covering fire, while minimising the enemy's through fieldcraft and extension. Emphasis on scouts and company training suggests more attention to initiative and open-order combat.

Unit training altered from 1898, the Green Howards described hill-warfare schemes against their battalion scouts, using: 'tactics learnt from our Afridi foes,' as: 'more attractive' than normal exercises, while inter-company hill-warfare training was: 'even more interesting.'¹³⁰ Interesting training is far more likely to stimulate progress and develop initiative than set-piece drills. Furthermore India-wide directions issued after Attock underlined that:

[i]n special practices this summer [OCs] Companies should endeavour to bring out the individuality of their men, who in a modern fire fight would, as often as not, have to rely on their own judgement.

India also introduced scout training which would have fostered initiative. That scout and hill-warfare training were conducted across India suggests that open-order tactics were being adopted.¹³¹ On the basis of the surviving evidence, the training was thorough and realistic, suggests that fundamental change was occurring.¹³²

Mountain Warfare 1900

Defects revealed during Tirah caused the issue of this new manual: 'based on

¹²⁹ L/MIL/17/5/1807 'Report Attock ... 1900'. Comments were circulated daily; participants' suggestions were recorded; Ibid p 2. 267 scouts participated; pp 2-10 (Special Peshawar DO 17/1/00); pp 35-6; Items 25-30 pp 88-9; Items 31-35 p 89.

¹³⁰ '2nd Bn News' GHG VII (1899), p 106.

¹³¹ L/MIL/17/5/1807 p 72; AG India No 1501D 19/7/99 on scout training.

¹³² 'Dalhousie Hill Manoeuvres October-November 1900' OXLIC 1900 p 219; L/MIL/17 5/358 Bengal Command Order 528 of 16/8/00 suggests that many others had been held in Bengal.

the experience gained in the late frontier campaigns.’ This suggests a more analytical approach to training. Significantly it was not titled ‘Drillbook’ as were other contemporary manuals, suggesting less tactical rigidity.¹³³ It started with mechanical instructions on skirmishing, though noting:

[i]n teaching skirmishing, the instructor will show his men how to make use of cover; he will explain to the section commander that the men should make the most of all cover.

This suggests that using cover was not universal hitherto, while its mention of section commanders implies greater emphasis on NCO initiative than *IDB 1896*. It saw that section commanders might need to train their men and that they would command without an officer being present. Significantly it included skirmishing unlike *IDB 1896*. This possibly suggests the influence of Hutchinson and others who had called for skirmishing’s reinstatement. *MW 1900* described scouts’ tasks imaginatively, stressing their special training: ‘as expert skirmishers over every variety of ground.’ Again, that this emphasised combat rather than reconnaissance suggests poor average tactical standards. This also suggests Hutchinson’s influence.

Rather anachronistically *MW 1900* had a long section entitled ‘company drill,’ which began mechanically, but it later advised that NCOs would be: ‘required to act on their responsibility in directing ... fire,’ that wider extensions were necessary, while accurate dressing and regular intervals were not.¹³⁴ Both suggest that much previous training was stereotyped, while the latter comments recognise low-level initiative. That *MW 1900*’s section on company training was longer than the battalion one suggests that companies were recognised as having greater tactical importance. Later this was an important South African deduction.¹³⁵ It instructed that:

¹³³ *MW 1900* (Simla 1900), preface. The skirmishing section was influenced by *IDB 1896*’s Drill of a Section in Open Order.’ That it used the term ‘skirmishing’ suggests an LI influence. It is just possible that Henderson’s ‘Technical Training’ influenced *MW 1900*, see below.

¹³⁴ *MW 1900*, pp 2,4-5,7.

¹³⁵ *Ibid* pp 5-13, the battalion section covered pp 13-20, but included logistics; *Ibid* p 9. Chapter 7.

section commanders should clearly understand that they must take their own section to the front whenever the ground favours it, without any regard to the order they were in.

This implies better use of ground and more NCO initiative. It stressed covering fire, recognition of increased enemy firepower. It saw that in open ground against enemies armed with breechloaders, extension between 8-12 paces was not excessive, a substantial increase on the previous 1-2 pace norm. Such extensions demanded initiative.

MW 1900's section 'Instruction of the Battalion' stressed reconnaissance; all battalions were to have scouts and were to cultivate soldiers' powers of observation. Unlike *IDB 1896*, it endorsed initiative wholeheartedly:

There is no possibility of laying down a drill, indeed it is very important that hard and fast rules should not be made. All ranks should be encouraged and taught to act on their own resources... Junior officers and [NCOs] should be taught to act on their own initiative... Once the general plan has been explained... it will sometimes be found impossible for further orders to be conveyed.¹³⁶

Pickets and flanking parties were to be kept small to economise on manpower, again implicitly recognising delegation and firepower, while *MW* stated: '[v]olley-firing in hilly country is... a waste of ammunition.'¹³⁷ This was a major change also needing low-level initiative.

MW 1900 summarises India's view of 1897-8's lessons, here its stress on skirmishing and scouts is important, and it gives pointers to the other 1898-9 hill manoeuvres and unit training. Units, which had been trained in accordance with it, would have been better prepared for conventional war.

¹³⁶ Ibid p 14, Buller made similar points, see fn 157 below. This has similarities with Hutchinson's comment, fn 98. It is possible that Hutchinson drafted *MW 1900*. He had served in Tirah and had training responsibilities.

¹³⁷ Ibid pp 13-14; Ibid p 18.

Tirah's Influence outside India

Tirah influenced Britain. General Wood, the AG, commenting on Hutton's *Lessons to be Learnt from the French & German Manoeuvres of 1897*, felt that dense German attack formations were possibly wrong, continuing:

the thought has perplexed me many times in the last month whether we have not made a mistake in doing away with skirmishing ... One officer, who has been ... in South Africa, wants us to have special skirmishing taught to battalions in that country, but it is apparently quite as much wanted on the [Frontier].... [S]ome ... regiments ... are absolutely doing nothing except firing volleys, which, at a single man.. are not much value. On the other hand we hear of 100 Ghorkas (sic) having shot at least 100.¹³⁸

That a non-IA officer, the British Army's effective 2ic, criticised tactical performance and poor initiative, while praising the Gurkha Scouts, who excelled in both skills, suggests Tirah's influence and the need for change in Britain. Wood later selected Ian Hamilton to take over at Hythe. Hamilton had a reputation as a keen shot, but Wood may have felt that his Tirah experience would be valuable.¹³⁹ At Hythe Hamilton criticised:

the attempts sometimes made by [COs] to control more than any one man is competent to control properly ... [C]ontrol of fire can always, in ... service conditions, be sufficiently loosened to admit of the individual initiative of the fire unit commanders, and of the intelligent co-operation of the men.

He later told the RCWSA that his most significant deduction after Tirah was that volleys were ineffective. Hamilton's comment in 1898 was less emphatic than his statement to the RCWSA but it implies that Hythe was changing.¹⁴⁰ Decentralisation was an important lesson for conventional war.

Henderson and Verner

Tirah's most significant effect in Britain was on two officers, Lt Cols Verner

¹³⁸HuPs 50086 Wood/Hutton 10/12/97.

¹³⁹ Gen Hamilton *Listening for the Drums* (1944), p 27, FM Wood *From Midshipman to Field Marshal* (1906), p 223. Though secondary evidence, the AG was heavily involved with personnel selection. Wood's third son was a Tirah veteran; Ibid p 243, Wood also corresponded with Methuen, eg Wood/Methuen 28/12/97 MePs 'Indian Diary.' That Wood, a follower of Wolseley selected a prominent member of Roberts' Ring as Hythe's Commandant suggests a strong reason, perhaps recent combat service, for selecting Hamilton.

¹⁴⁰*Report ... Musketry Training ... 1898* (1899), p 45; *RCWSA Evidence I* p 112.

and Henderson. They collaborated to develop a new tactical model based on Tirah and Peninsular LI tactics. Henderson in his lecture 'The Technical Training of Infantry,' delivered with Roberts presiding, saw 1897-8 as having significant implications for future tactics. He cited a Tirah veteran:

Some regiments, notably several belonging to the native army, were at home from the first. Butthese regiments had received a thorough [LI] training; their officers, as almost all the officers of the native army are, were accustomed to responsibility.... Anything better than the skirmishing of the Guides,...[and] the 20th PI, I never wish to see. I pity the Russians that come across them in their native hills.¹⁴¹

The last point emphasises the value of skirmishing in conventional combat and that Tirah's lessons applied in major wars. The veteran then criticised British troops for inertia, bad fieldcraft and tactical naiveté. Henderson went on to conclude that India's instructions and hill manoeuvres suggested a way ahead for tactics generally. He then analysed tactics, concluding that progress demanded that:

1. Regimental officers, including company commanders, to be left more to themselves on field days.
2. An extended course of physical training...
3. Practice as [LI] over difficult ground.
4. Careful instruction of the individual skirmisher.

All points involved training, three emphasised subordinate initiative and two covered fieldcraft and the use of ground.¹⁴² Henderson compared the Peninsula with the Frontier, concluding that there was 'a striking resemblance,' while LI's Peninsular successes were based on:

The correct habits of command instilled into...regimental officers, and ...training ...their judgement...[T]he system under which the Light Brigade became so famous is the most effective means of training the British infantry of to-day.¹⁴³

LI tactics applied in continental warfare, particularly in the later stages of attacks and in broken ground where: 'much will depend on the intelligence ... skill, and

¹⁴¹ 'Technical Training' pp 9-10; Henderson, *Science* p 343.

¹⁴² He did not specify what these instructions were, though the Mountain Warfare Syllabus is possible; *Science* p 349; Henderson 'Training' pp 497-8. Ground is covered in point 3 and implicitly in 4.

¹⁴³ Henderson *Science* pp 500-1, this section was not given in Dublin.

...readiness of the individual skirmisher.' Clearly this emphasis on skirmishing and initiative was important, but Henderson's most important point was on the LI system's master feature: '*inculcating ... correct habits of command in the regimental officers (sic).*' Henderson's analysis had implications for future training and initiative, but perhaps the most important was that it foreshadowed the need for doctrine which balances initiative and control.¹⁴⁴

Hitherto Henderson had very much concentrated on the American Civil War and 1870. 'Technical Training' which draws heavily on the Peninsula War and LI, not to mention Tirah was a new departure for him. Henderson referred to his source:

I am much indebted to Lieut-Colonel... Verner... for much information as regards the methods of training ... at Shorncliffe, and the character of the Light Brigade fighting... as well as.... many ideas as to the fighting of the present.'¹⁴⁵

Verner did not acknowledge Henderson when introducing *A British Rifleman*, possibly suggesting that he originated the idea. In it Verner remarked:

the most pressing military problem is how to conduct an attack on troops armed ... with magazine rifles, which owing to their flat trajectory and extraordinary rapidity and precision of fire, are overwhelming in their effects against favourable targets up to 2000 yards. The object-lesson most recently before us is ...[Omdurman], where the absolute impossibility of masses of men advancing under modern artillery and rifle fire, although known to students of war, was practically demonstrated again to the whole world. The unusually heavy losses experienced by our troops in the fighting on the Indian Frontier in 1897 was mostly due to the able manner which the Afridis...took advantage of the ground and worked in unison (as did the Riflemen at Tarbes.....) to assist and support one another, and thus to develop their fire so as to obtain the maximum value from it with the minimum exposure and loss to themselves. The accounts by officers who served in that campaign bear a striking resemblance ...of the methods of fighting of the Riflemen during the Peninsular War. It is notoriously difficult to prophesy, but I...believe that the ... conduct of attacks in the future will ... be solved by adopting some system based on the methods originated ... by the first regiment of Riflemen.¹⁴⁶

Verner stressed the Shorncliffe training system, its emphasis on companies and its current tactical applicability. Verner's introduction does not appear to have had much subsequent influence, but Henderson's 'Technical Training' was widely

¹⁴⁴ Ibid pp 503; 499. Chapter 9.

¹⁴⁵ 'Technical Training' p 12.

¹⁴⁶ Ed Lt Col W Verner, Maj G Simmons *A British Rifleman* (1899), pp xix -xxi.

reprinted, reviewed, amplified and influenced India.¹⁴⁷ That it was given in Ireland with Roberts presiding probably accounts for the latter's stress on skirmishing on the 1899 Irish Manoeuvres.

Tirah's Influence on Roberts and Buller

Tirah influenced both the first 2 CinCs South Africa, Roberts and Buller. Both held major commands in 1899, Ireland and Aldershot respectively from whence many units deployed to South Africa. Roberts commented in 1898:

During the recent campaign on the ... Frontier....our enemies taught us what could be done with weapons ... inferior to ours.. [W]e must discard the notion... that only volleys will be ... effective.

He continued, castigating officers who preferred drill to shooting, who showed: 'their inability to understand the extreme importance of Musketry (sic) training.'¹⁴⁸ It is possible that Roberts' criticism of volleys was influenced by Ian Hamilton, though Roberts had many other sources of information on Tirah.¹⁴⁹ In 1899 Roberts emphasised fire at moving targets at unknown distances: 'the kind of shooting that is required in skirmishing,' while some soldiers should be trained:

to be real experts in the use of their arms-men who would be able to act as usefully and intelligently as the Gurkha Scouts.¹⁵⁰

Roberts also urged that officers be trained to accept responsibility in a document on the forthcoming 1899 manoeuvres. On the same day he advocated better barracks to attract higher-quality recruits as:

under the conditions of modern war, the man of higher intelligence is three times as valuable as his illiterate ... comrade.... [I]n these days of extended formations, great demands are placed upon ... individual intelligence of the private soldier, and the better educated a man is, the more valuable he will be.

There is no direct connection between the two documents, but open-order tactics had

¹⁴⁷ *ANG* XL (1899), pp 721,817-8; *BA* LXII (1899), pp 240,263-4; Maj Mayne 'The Training of Infantry for the Attack' *USM* XX (1899); Akers-Douglas Committee Q 6378, Henderson did not expand on this.

¹⁴⁸ RPs 7101-23-107 'All Ireland Rifle Meeting Speech 1898.'

¹⁴⁹ See fn 140 above. No confirmatory correspondence survives in the Roberts or Hamilton Papers.

¹⁵⁰ RPs 7101-23-110-1 'All Ireland Army Rifle Meeting 29/7/99.'

been validated in Tirah and demanded higher-quality soldiers, capable of initiative.¹⁵¹

That Roberts intended that the 1899 Irish Manoeuvres would train units in skirmishing and develop initiative suggests Tirah's influence.¹⁵² This was probably due to Henderson's lecture, given in March 1899. Articles in *The Times* on these manoeuvres, inspired by Roberts, stressed initiative, skirmishing and LI. The correspondent, almost certainly Henderson, criticised dense attacks and: 'regular and precise methods [of the] parade ground,' while noting that battalions in which: 'company officers are traditionally given a free hand' were better skirmishers. This suggests that they were LI. He continued:

Lord Roberts endorses ... that skirmishing is likely to play a conspicuous part even in Continental warfare...It is well known that Lord Roberts is as keen on good skirmishing ... [as] good marksmanship ... [T]he skirmishing tactics of the ... Light Brigade.. forman admirable model for the British Infantry of today.¹⁵³

Skirmishing was: 'not to be learnt in a day' and the Manoeuvres': 'standard was not that of the Peninsula or Tirah.' Till all soldiers had individual instruction in using cover, casualties would be excessive. He criticised frontal attacks when cover was available, recommended that infantry firefights should be longer. This implies that more fire would be needed to counter increased enemy firepower. He recommended that in close country companies should advance stealthily and surprise the enemy:

This was the style of fighting in which the ... Light Brigade excelled. These are the tactics of the Boer and the Afridi.

This reference to Boers may have anticipated the forthcoming war or may have looked back to 1881, but, as official warnings had already been issued on the South African situation, the former is likely.¹⁵⁴ The correspondent continued:

¹⁵¹ Ibid 'Irish Manoeuvres Circular Memorandum' 6/7/99; 'Improvements to Barracks,' Chapter 7

¹⁵² Col Henderson Akers-Douglas Committee Q 6458. Though Henderson's evidence was years later, *The Times*' contemporaneous reports cited below support it.

¹⁵³ *Times* 31/8/99; Evans/Archivist News International 19/11/01; career-conscious juniors do not lightly attribute opinions to Field Marshals.

[w]e want soldiers with wits... the development of individual intelligence and resourcefulness... must be a main end of regimental training. In this respect, however, there is something still to be desired.

The Irish Manoeuvres had: 'forcibly impressed the importance of training our young officers to use their judgement and to rely on their own resources.' The article suggests a shift in Roberts' thinking. Previously he had proposed thickening formations to control skirmishers. Tirah and Henderson's lecture had probably caused this shift. This conclusion is based on negative information and thus is not totally satisfactory.¹⁵⁵

Buller's 1899 'Memorandum on Field Training' made points, which by content were probably drawn from Tirah. There is no evidence of a direct link, but at the same time as Roberts was emphasising initiative and skirmishing, Buller also did so. The coincidence that two major commands were stressing skirmishing at the same time possibly suggests that Wolseley and Wood were trying to prepare the Army for South Africa.¹⁵⁶ But there is no supporting evidence for this claim and Buller may have initiated his Memorandum independently for the same purpose. In it he criticised stereotyped infantry formations, stressed modern rifles' firepower and mentioned scouts who were then most prominent on the Frontier. Buller also highlighted: '[a]t company training commanders should devote more time to practice skirmishing.' Buller was a Rifleman and thus familiar with skirmishing but had allowed it to be deleted from *IDB 1893* despite as AG being responsible for training. Tirah probably caused his emphasis on skirmishing as in no other contemporary campaign was it so prominent. Though control was needed during range-work, Buller impressed: 'once thoroughly taught the soldier should be permitted to use his

¹⁵⁴ Issued on 18/8/99, LS Amery *THWSA* VI (1909), p 243.

¹⁵⁵ 7101-23-100-1 Roberts/Cambridge 5/2/86; the following have been scanned: RPs 7101-23-97-1, 7101-23-97-2, 7101-23-100-1-6. This has a letter (21/9/86) on hill fighting, skirmishing is not mentioned; 7101-23-100-7, 7101-23-101-1, 7101-23-104 -107, 7101-23-110-1, 7101-23-126-2, *The Rise of Wellington* (1895). Roberts was in communication with several IA officers and Hamilton, so he had ample information on Tirah.

¹⁵⁶ *REJ* XXIX (1899), pp 214-5. It was published on 2/10/99 suggesting that the original was issued earlier. Roberts' circular on the Irish Manoeuvres was issued in July 1899.

individual intelligence.’ He criticised unnecessary movement and exposure, both Frontier rather than Sudanese lessons, continuing:

The stereotyped line is an evil; it is not necessary that a company when extended should move in an exact line. The formation should conform to the ground.¹⁵⁷

Henderson had made similar points when criticising normal formations. Buller also stressed companies, recommending delegation to their OCs. This occurred at a time when battalions were the tactical unit. Buller had not changed this emphasis on battalions during his time as AG, suggesting that his tactical thinking had developed recently. This further implies that Tirah was the cause, for, as Franklyn noted, the tactical unit in the Sudan were brigades. Buller also recommended practicing: ‘dribbling men over bullet-swept ground.’ This was a specific Frontier lesson; there was no similar exposure in the Sudan. Buller also stressed that soldiers should fire directly on seeing the enemy, this recognised soldiers’ initiative and was a Frontier not a Sudanese lesson. It represented a rejection of volleys.¹⁵⁸

The Frontier and Modern Warfare

This section examines contemporary links between the Frontier and modern warfare or with South Africa. Hamilton exploited his Tirah experience in South Africa, while Fortescue noted that long-range rifle fire’s importance had been deduced from Tirah.¹⁵⁹ An anonymous article on South Africa, later attributed to Henderson, commented:

much attention had been paid to skirmishing and the reduction of losses by offering the very smallest target. The importance of such tactics had been driven home by the ... Frontier; and the regimental officers in South Africa, discarding the dense and regular lines of Aldershot and Salisbury, at once deployed their men at wide intervals, encouraged them to make use of all natural cover, to imitate the Boers in invisibility.¹⁶⁰

¹⁵⁷ Lt Col Verner ‘Infantry Training (Provisional)’ *RBC* 1902 p 159; Buller ‘Memorandum’ p 215.

¹⁵⁸ Rodwell *Bangalore* p 59. Aldershot training was artificial, Tirah would seem the likely source.

¹⁵⁹ V Sampson and Gen Hamilton *Anti-Commando* (1931), p 112, though this is secondary evidence, Hamilton had trained his brigade in open-order tactics just beforehand and had written *Tactical Deductions from Tirah* suggesting the link; ‘Our Army and Its Critics’ *MM* 83 (1900), p73.

¹⁶⁰ ‘The War in South Africa’ *EDR* CXCI (1900), p274. KT Sturridge *Managing the South African War* (1998), p62 attributes this to Henderson, who naturally was unlikely to underplay his own part.

Later the RUSI's Secretary wrote on skirmishing, commenting that it had become more appreciated in India after Tirah and that modern warfare required its reintroduction. He emphasised Gawler's work. Holden, the Secretary, had no regimental background which made him aware of skirmishing or Gawler. This suggests that he may have been encouraged to write by the Army. The RUSI had close links to the Army establishment.¹⁶¹ Also in 1900 Rifle Brigade officers published *The Theory and Practice of Skirmishing*. The appearance of 2 works on skirmishing in 1899-1900, one of which referred to Tirah, is significant. Skirmishing was associated with LI and initiative and indicates the adoption of decentralised tactics. These more or less simultaneous publications may also suggest an attempt to prepare tactically for South Africa. Somewhat later Plowden wrote *Notes on Skirmishing*, based on Tirah and South Africa. He stressed inculcating soldiers with initiative.¹⁶²

Methuen, a Tirah veteran, later a divisional commander in South Africa, analysed Dargai, concluding:

The only way to carry a position in these days of quick-firing arms of precision, is to push forward at close intervals line after line of men in extended order and under perfect control.

He overestimated commanders' powers of control, but his recommendations on extension would have counterbalanced the former. Methuen was using the Frontier to make deductions on future conventional war. He also highlighted outflanking, questioned volleys' value in European warfare and criticised British shooting. All based on his Tirah service:

In our small Army, it should be our first object to make up for our disparity in

¹⁶¹ Research at the RUSI has been unable to confirm this, but the Army was represented on the RUSI Council, while the RUSI's secretary was well placed for conducting historical research.

¹⁶² Lt Col Holden 'The Art of Skirmishing' *JRUSI* XLIV (1900), he was from a non-LI regiment and remote from unit service; *The Theory and Practice of Skirmishing* reviewed *RBC* (1900), but the work has not survived. These works on skirmishing were possibly written in autumn of 1899, suggesting an attempt to prepare for South Africa; *Notes on Skirmishing* (Lahore 1900), reprinted *OXLIC* (1900).

numbers compared to any European Army by using our best energies to produce fine shots at moving targets at unknown distances.¹⁶³

Methuen's views were similar to Roberts'.

In September 1899 the Guards commented that scouts so speeded tactical movement that light companies might be introduced into units.¹⁶⁴ Given that training in Britain was artificial, this implies a link both to Tirah and to Hutchinson's and Yate's works. Though scouts are mentioned in *IDB 1896*, their operational value had been proved most recently on the Frontier. It has not been possible to find references to infantry scouts in training in Britain between 1897-8. This is negative information and thus far from satisfactory. Their comments also suggest that training was changing in 1899, possibly due to Buller's Memorandum, which, as Chapter 3 shows, the Guards were well aware of.

In Natal Symons introduced Frontier-style training and Smith-Dorrien used Tirah's lessons on exercise.¹⁶⁵ In 1899 a 'communicated' article 'How to Fight the Boers' commented that Boers and Afridis had: 'many characteristics in common,' that they were: 'probably about the best skirmishers in the world,' while their tactics were: 'almost identical.' The article stressed fieldcraft, extension and scouts. It may have been part of an officially inspired attempt to prepare the Army for South Africa. Its comment on Afridi skirmishing seems to echo Lockhart's Memorandum, cited above. Tainton also emphasised similarities between Afridis and Boers. It would be tempting to dismiss this linkage as flimsy, had not Roberts reached similar conclusions.¹⁶⁶

South African combatants stressed Tirah's positive influence. The KOYLI's CO felt that: 'experience ... from Tirah' had saved many casualties. Verner praised

¹⁶³ MePs 'Indian Diary' 'The Attack on Dargai' p 1; Ibid pp 2-3.

¹⁶⁴ *HBM II* (1899), p 633; its publication in September suggests a link to Buller's Memorandum.

¹⁶⁵ Maj Crum *With the [MI] in South Africa* (Cambridge 1903), p 8; Gen Smith-Dorrien *Memories of 48 Years Service* (1925), p 134. This is secondary, but he probably was able to use contemporary documents when writing.

¹⁶⁶ *BA LXIII* (1899), p 401, 23/9/99; *The War and Its Lessons* (1900), p 11; *RCWSA Evidence II* p 64.

their performance; two important works concurred.¹⁶⁷ Du Moulin, a Tirah veteran, noted that Smith-Dorrien, another Tirah veteran, commanding many others, had outsmarted the Boers due to his Frontier experience. Capt Wake recalled that: '[p]rofiting from ... Indian hill warfare, the men had been trained to rely in each advance on covering fire directed over their heads by those behind them.' This suggests that covering fire had been downplayed before 1897. It also shows the Frontier's direct effect on training.¹⁶⁸ Gen Nicholson, Lockhart's former COS, when serving with Roberts felt that: 'Boer tactics closely resemble those of the tribesmen on the ... Frontier.'¹⁶⁹ Lt Col May commented that the Boers had been underestimated despite Tirah. Callwell compared the 2 campaigns and Maj Norris remarked that Tirah could have been tactically beneficial in South Africa.¹⁷⁰ The Germans emphasised that the Frontier had showed more modern conditions than most colonial wars and that it had demonstrated the need for initiative and marksmanship. Balck, who influenced *CTrg 1902*, concurred.¹⁷¹ Both had received much British help with their works and it is possible that their views reflect official British opinion. Even if this was not so, that such astute commentators stressed the Frontier's positive effects is significant. Churchill saw many similarities between South Africa and the Frontier. A service magazine recommended that scouts, modelled on the Gurkhas, should be established. Lt Col Ovens noted the importance of scouting in South Africa, citing Tirah's example.¹⁷² Maj Mayne and Lt Garwood linked the two campaigns. Dr Miller-Maguire felt that: 'Tirah was more instructive

¹⁶⁷ *The Bugle* XIX (Jun 1902), p 4; 'The Naval Brigade at Graspan' *MM* LXXXI (1900), p 341; Gen Maurice *BROHWSA* I (1906), p 224; Amery *THWSA* II p 339.

¹⁶⁸ *Two Years on Trek* (1907), p 12; 'The Capture of Twin Peaks' *KRRCC* (1909), p 125, *MW* 1900 p 8.

¹⁶⁹ PRO/30/40/3 Nicholson/Ardagh 4/4/00.

¹⁷⁰ *A Retrospect on the South African War* (1901), pp 1-2; *The Tactics of Today* (1900), pp 102, 133; *The South African War* (1900), p 49.

¹⁷¹ Trans Col Waters *GEOHWSA* I (1904), p 24; 'The Lessons of the Boer War and the Battle-Working of the Three Arms' *JRUSI* XLVIII (1904), p 1277.

¹⁷² *Hamilton's March* pp 90-2, 94-5; *BA* LXIV (1900), p 418; 'Notes on the More Obvious Lessons' *JUSII* XXIX (1900).

than South Africa,' while Capt Walton saw a 'remarkable' similarity between their lessons.¹⁷³

That many saw the Frontier as significant for modern warfare, or felt it exerted a positive effect in 1899-1902, is important. Inevitably the rehearsal of evidence is tedious, but that so many made the connection suggests that it was a reasonably widespread view.

Conclusions

Too few British units fought in Tirah which occurred too soon before 1899 for its lessons to be felt across the British Army. South Africa was necessary to drive the lessons home, indeed many before 1899 saw them as relevant only to Frontier warfare. But Tirah speeded subsequent change. Some key individuals, notably Henderson and Roberts, made deductions for general warfare from Tirah, and Henderson links Tirah to the Army's 1902 manuals.

In Tirah the Army fought formidable foes armed with modern rifles. Some appreciated that defence was now more powerful, deducing that outflanking was the counter. Firepower's effects were manifested in longer engagement ranges and greater dispersion. Individual marksmanship and greater firepower were stressed. Firepower in turn demanded fieldcraft, apparently first widely taught after Tirah. Fieldcraft required individual initiative.

Combined with these changes was revival of interest in the LI system. This balanced initiative and discipline in dispersed combat. Henderson and Verner developed a new tactical model, synthesising Tirah's experience and the LI system. Tirah emphasised scouts; they remained a common theme in both professional

¹⁷³ *The Infantry Weapon and Its Use in War* (1903), pp viii-ix; 'Realistic Targetry' *JRUSI* XLVI (1902); 'Strategy and Tactics in Mountain Ranges Part II' *USM* XXVI (1902); 'The Practical Training...' *JUSII* XXX (1901), p 261.

literature and training till 1914. Partly this reflects the new difficulty of reconnaissance, partly the need for greater individual skills in dispersed combat.

Training is fundamental in implementing tactical change. Hill-manoevres were valuable for conventional warfare, while Roberts emphasised skirmishing in Ireland. Tirah affected Aldershot training. Delegation of training to sub-units fostered initiative. The most significant Infantry lessons, drawn mainly from Tirah, were independent fire, fieldcraft, use of ground, and skirmishing. Artillery was strengthened due to growing tribal firepower, while concentration of artillery fire and close support of infantry were emphasised. The Campaigns demonstrated the importance of sound animals and well-organised transport for mobility and tempo.

As will be shown, the learning process after Tirah was similar to South Africa's, though smaller. In both similar weaknesses were demonstrated and similar remedies proposed.

Chapter 3. The South African War

We have had no end of a lesson. It will do us no end of good!

Introduction

This Chapter analyses changes in weapons technology before and the tactical results during the South African War. It also examines the course of the war briefly and the attempt to learn lessons. This was not new; Tirah had seen a similar, though smaller effort, while data had been gathered after the 1882 Egyptian Campaign. That South Africa was the commonest experience of combat for British officers in 1914 broadened this process.¹

Weapons Technology and Tactics

This section assesses the technological changes and their tactical implications. The main change was that South Africa was the first war in which nearly all weapons fired smokeless ammunition. As a result, the British, who were generally attacking, encountered the empty battlefield as General Lyttelton recalled:

Few people have seen two battles in succession in such startling contrast as Omdurman and Colenso. In the first 50,000 fanatics streamed across the open regardless of cover to certain death, while at Colenso I never saw a Boer all day.²

There were stark differences between Dervish and Boer tactics and weapons, but

Callwell suggested the ultimate cause:

[t]he disappearance of black powder has exerted a far more potent influence in moulding tactics...than the increased power and accuracy or the rapid fire of the modern rifle or gun. Concealmenthas gained a ... commanding importance.

Smokeless ammunition meant that even after weapons opened fire they remained hidden. Fieldcraft consequently became much easier and reconnaissance much harder.

Smokeless ammunition's more energetic propellants led to longer-ranging fire, further enhanced by South Africa's very open terrain. Long-range fire exacerbated the problems of locating distant, hidden weapon. Defeating them demanded more time,

¹ Tables 4&5. This was not necessarily so for the Indian Army.

² FM Lyttelton *Eighty Years* (nd), p 212, he wrote much later but his contrast is valid.

firepower or both.³ More energetic propellants also resulted in flatter trajectories. The Lee-Metford's trajectory was half of the Martini-Henry's, consequently hit-probabilities increased. Higher muzzle velocities demanded the introduction of smaller-calibre bullets. These weighed less, so soldiers could carry more rounds. Smokeless ammunition also meant that there was less smoke-obscuration and barrel-fouling. The Lee-Metford and the Mauser, the standard rifles carried by both sides, had magazines. The latter was cliploading.⁴ All these features meant that firepower had increased substantially. Chapter 7 examines the implications for command and initiative.

More effective weapons made entrenchment essential, but smokeless ammunition also increased the value of trenches. Increased firepower also meant that defensive positions could be extended as fewer troops were needed to hold them. This benefitted the Boers who were generally defending tactically. In turn the British needed more mobility to outflank such positions. Entrenchment and concealed enemy weapons meant that covering fire, itself more important, increasingly had to be applied to areas. For this artillery, classically an area weapon, was more effective than rifles. Consequently British artillery increased in South Africa's conventional phase both quantitatively and qualitatively. Artillery's higher trajectories are more effective against trenches than flat-trajectory small arms, while explosive shells damage structures.

Howitzers are generically more suitable for firing HE than guns. Furthermore howitzers then were the only British fieldpieces firing HE and thus able to destroy defences.⁵ This, together with their ability to engage defiladed targets caused the British to increase howitzer numbers. But destroying defences requires vast tonnages of shells and such volumes of fire were impossible to generate in South Africa. Consequently

³ FW Lanchester *Aircraft in Warfare* (1916), pp 35-6; Chapter 2.

⁴ Major Callwell *The Tactics of To-Day* (1900), pp 6-7; WW Greener *The Gun and Its Development* (1899), pp 539-40, 664, Glossary; ECR Marks *The Evolution of Modern Small Arms and Ammunition* (1898), p 108. Lt Churchill *The Story of the Malakand Field Force* (1899), p 288 for the flat-trajectory Lee-Metford's effects; Table 43; PRO 30/40/16 'untitled memorandum on weapons' saw these technical improvements as increasing rifles' firepower ten-fold over single-loaders.

many argued that greater mobility was needed to defeat entrenched forces rather than artillery with its logistic penalties. This naturally assumed that there was space in which to manoeuvre.

In 1899 most artillery fired smokeless ammunition. Pieces, like British mountain guns, which still fired black powder were handicapped. Between 1899-1902 British field artillery was at a disadvantage compared to rifles whose relative ranges were greater than artillery's.⁶ Later this would encourage Indirect Fire, though, as experts predicted, concealed enemy weapons firing Indirect would also have promoted its adoption.⁷ Artillery was poised for the introduction of QF pieces, but except in France a true QF fieldgun had not yet emerged. South Africa resulted in great pressure to introduce QF artillery in the British Army.

Tactical Changes

Generally British military opinion was confident prewar: 'no one, or hardly anyone, believed in anything but a "walk over."' ⁸ That the first tactical analysis came before fighting began suggests that some commanders realised that British tactics needed improving. Three commanders, Colvile, Kelly-Kenny and Roberts drew up general tactical instructions just before or at the start of the war. Colvile, issued several tactical instructions in this period.⁹ His first emphasised that all ranks should understand their superiors' aims as orders could rarely be transmitted in action. He stressed the company-level. Both implied initiative. In an attached document issued at Gibraltar, Colvile considered that even company commanders would be unable to control their commands completely due to greater enemy firepower. NCOs must therefore regulate the rate of advance, again acknowledging initiative. This possibly

⁵ There were no HE firing pieces below corps-level except the 5" Howitzer in 1899, Table 37; Glossary.

⁶ Tables 22&23; LS Amery *THWSA* VI (1909),p 474; Ibid p 482 saw Boer riflemen as the RA's most dangerous enemy. Prewar RA tactics emphasising close-range Direct Fire exacerbated this problem.

⁷ Tables 22,23&20. Lt Col Emslie 'The Possible Effects on Tactics of Recent Improvements in Weapons' (AMS 1899),p 7. Long-ranges promote Indirect Fire due to intervisibility issues.

⁸ BulPs 2065 M /SS4/21 'Lonsdale Hale Memorandum' p 2.

reflects the experience of Tirah as NCOs had set the pace there. That Colvile was stressing the effectiveness of firepower shows that there had been recent change in British tactical thinking. Ardagh had noted that even as late as 1898 firepower had been underestimated. This suggests that Tirah may have been the cause; no other recent campaign had seen British troops so exposed to modern rifles.¹⁰

Colvile stressed rapid attacks; long firefights would be disadvantageous against: 'good and quick shots.' He emphasised using ground and covering fire. Both acknowledged greater enemy firepower; Tirah had stressed both. The Germans later criticised the British for overemphasising assaults, blaming this bias on colonial warfare, but there was some logic in closing rapidly with the Boers. Long firefights would allow better Boer marksmanship to tell.¹¹ But these tactics demanded heavy covering fire, best delivered by artillery, or night attacks. Colvile covered neither. He condemned flanking movements under Direct Fire and halting without returning fire. Buller's 1899 Memorandum had also emphasised both.

Colvile stressed combining fire and movement and section commanders' duties, implicitly acknowledging low-level initiative, as did his insistence that: 'every man in the ranks' was to know his views. Colvile's instruction included an extract from Buller's Aldershot Memorandum. That this document had reached Gibraltar, suggests that it had been widely distributed, increasing its significance.¹²

Colvile's next document, *Infantry on the Offensive*, noted that, following 1870, the British had developed deep, narrow, 3-line brigade attack formations. Colvile analysed this in the light of the conditions anticipated in South Africa. Depth was designed to defeat counterattacks, to stiffen the firing line before assaulting, whilst reserves would

⁹ *Official Records of the Guards' Brigade in South Africa* (1904), pp 11-20.

¹⁰ Chapter 2; PRO 30/40/16 'untitled memorandum.' Henderson had also underestimated firepower, RPs 7101-23-46 Henderson/Roberts 1899; Chapter 2.

¹¹ *Guards* p 12; *GEOHSA I* (1904), p 28.

¹² *Guards* pp 11-13 dated 8/10/99; Chapter 2. Gibraltar was not under Buller's command.

permit pursuit or cover retreat.¹³ These advantages were probably worth the loss of firepower against European enemies. Against Boers, whose accuracy was equal to the British and who fired faster, Colvile had doubts. He noted superior Boer mobility, their inferior artillery and that they had no cavalry. He concluded that, as the Boers lacked bayonets, were ill-disciplined and had never let the British assault before, they would fire and then retire. Colvile consequently deduced that the British firing lines probably would not have to cross bayonets and so could be thinned-out. This would reduce casualties and enhance their ability to use ground. As the Boers would rarely counterattack, local reserves could also be cut. The second line, intended for pursuit, was unlikely to execute this as all Boers were mounted. Therefore Colvile proposed a 2 rather than 3-line formation. This would have a much stronger firing line, 15 half companies (8 in the original) with the same number as supports. It would deploy on a wider frontage, (900 as opposed to 580 yards). This was too narrow, judged by formations used later in South Africa, but was greater than current British norms. Significantly Colvile had already considered loosening formations before he had much information on current Boer tactics. He had already appreciated the effects of greater firepower.

Colvile's last instruction was written while moving to the front and was based on official and press sources.¹⁴ Firing lines were not to be reinforced prematurely, this had caused great loss, and COs were not to keep excessive reserves. At Elandslaagte Boer fire had been effective at over 2000 yards, so extension should occur some 2500 yards from them. The British had dispensed with 3 lines there, thus enabling more firepower to be generated from a broader, shallower formation. Officers should be cautious in exposing themselves, but it was their duty to lead. Colvile clearly saw the need to maximise protection and firepower. He also added: 'interference with subordinates

¹³ *Guards* pp 13-17 dated 12/11/99.

¹⁴ *Ibid* pp 18-20 dated 16/11/99.

during an action is likely to do more harm than good.' This recognised the difficulties of commanders exercising close control under heavy fire and the need for subordinate initiative.¹⁵ The counter to Boer mobility was a small party and machinegun on the exposed flank. Their fire would prevent the Boers withdrawing. This suggests that Colvile recognised machine guns' firepower comparatively early. In 1899 they, partly due to their perceived mechanical unreliability, were poorly regarded.¹⁶

No tactical instructions issued by Methuen have survived, but an officer reported the changes that he introduced before action:

an example of [Methuen's] practical methods: officers are to discard their useless swords and carry rifles.... to confuse the Boer marksmen. All the old Aldershot Drill Book Tactics are to be abolished & we shall adopt very extended order, men getting quickly from rock to rock, irregularity of line being sought & "regular dressing" being avoided.¹⁷

'[F]rom rock to rock' suggests Frontier experience as the area of Methuen's advance is rolling veldt. There rocks do not provide cover except immediately around kopjes. Also Methuen's points suggest recent combat experience against modern weapons. His previous career, except his Tirah service, had not stressed low-level tactics.¹⁸

Furthermore Verner, an advocate of Frontier-style tactics, was on his staff, while the KOYLI, one of Methuen's units, had served in Tirah and had benefitted tactically.

Some of Methuen's units practiced open-order formations before combat:

we had drummed it into our men that they must keep widely extended so they kept about 6 or 10 paces apart while the Grenadiers were crowded to 1...& suffered accordingly.¹⁹

¹⁵ Three British generals were early casualties: Symons, Buller and Methuen, Chapter 9.

¹⁶ Maj Longstaff & AH Atteridge *The Book of the Machine Gun* (1917), pp 137-8. The work is technical assessment and is backed by an impressive bibliography. Colvile had served in Uganda and may have seen their value there.

¹⁷ BaPs 7807-23 Reel 1 18/11/99.

¹⁸ Having visited both the Khyber and Methuen's route, this seems likely. That Methuen was stressing irregularity of formation before seeing action in South Africa himself suggests recent combat experience. As Chapter 2 argues Tirah was the probable cause; Lt Col Verner 'The Naval Brigade at Graspan' *MM* 81 (1900), p 338 describes kopjes. These are relatively isolated but in the dead ground at their base, extended order is unnecessary; Glossary.

¹⁹ Chapter 2; Maj Gen Maurice *BROHSA* I p 224; Amery *THWSA* II p 339. That both works praise the KOYLIs suggests a strong impression; BaPs Reel 1 18/11/99.

The latter seems to have been an unofficial prewar norm for British-based units. This also suggests that Colville's instructions were poorly implemented.

Roberts published tactical instructions soon after arriving at Capetown.²⁰ Already, advised by Kitchener, he had demanded more machineguns and was considering whether to request QF guns.²¹ In his first instruction Roberts noted: 'remarkable' Boer mobility, marksmanship and entrenchment. Direct attacks would fail, so: '[t]he only chance of success lies in being able to turn one or both flanks' or threaten Boer communications. Both demanded great mobility, thus Roberts stressed horsemanship and mounted reconnaissance. He recommended early deployment from marching columns, with 6-8 paces between men. This would increase battalion and company commanders' responsibilities so they should have the objective explained to them. This implies that they did not previously.²² Roberts emphasised cover and its exploitation to enfilade the enemy, suggesting he understood modern firepower. He would judge officers: 'by the initiative displayed in seizing rapidly every opportunity to further the general scheme of attack.' Henderson's 1899 Lecture may have stimulated his emphasis on initiative.²³ Roberts noted that the RA had adapted well to local conditions, but he stressed the need for thorough artillery preparation of attacks. But he warned that, until infantry advanced within 900 yards of the enemy, artillery would have no target as the Boers would remain in cover. Consequently fire was to continue: 'until the assault is about to be delivered.' More effective artillery support was necessary to combat greater defensive firepower. But synchronising artillery fire and assaults demanded better signals and staffwork; both were to pose problems for the British.

Notes for Guidance in South African Warfare is shorter and was pitched at a lower

²⁰ RPs 7101-23-111-1 COSCM 5 26/1/00. Roberts had the benefits of 'Black Week.'

²¹ Roberts/Lansdowne 27/12/99.

²² Chapter 2 suggests that orders before action were rare.

²³ *GEOHSA* I p 245; Chapter 2.

level judging by its contents.²⁴ In it Roberts stressed quick cavalry scouting and reducing horse loads. Artillery was to exploit its mobility to counter long-range Boer guns. Others had deduced this already, possibly explaining Long's action at Colenso. Roberts recommended that batteries should advance alternately and were to be well separated. This had already occurred at Elandslaagte and differed from normal tactics.²⁵ Roberts also appreciated the importance of mobility, reorganised his transport to increase it and levied more mounted troops as Chapter 5 describes.

General Kelly-Kenny's *Standing Orders and Instructions*, issued after December 1899 began by impressing:

on all ranks the necessity of bringing common sense to bear in the execution of regulations....It is not by blind adherence to the rules of war, ... that success can be commanded. It is necessary to consider how far our teaching must be modified to meet...-Smokeless powder ...[and] [i]ncreased [enemy] mobility.²⁶

That Kelly-Kenny cited smokeless ammunition suggests that he had analysed tactics carefully. He felt that both these points had to be considered when applying regulations. That his orders were addressed to 'all ranks' suggests that he saw low-level initiative as important. Smokeless ammunition meant that locating defenders was hard, thus strengthening the defence, while Boer mobility would prevent outflanking unless British mobility improved. Kelly-Kenny considered that the Boers had selected defensive positions well. They were highly mobile, had good combat intelligence and laid ambushes effectively. They had neither counterattacked failed British assaults, nor had hardly attacked tactically. British attack formations, therefore, should sacrifice depth for width. Colville had also stressed this. The British should use their mobility to turn or outflank Boer positions. They should try to kill the Boer horses, thus destroying their mobility. In attack the British should seize temporary positions, which could be

²⁴ RPs 7101-23-111-1 F69 5/2/00.

²⁵ *GEOHSA* I pp 60-1; Maj Gen Marshall 'Remarks on Royal Artillery Drills 1899' *PRAI* XXVI (1899), p 542; Chapter 2.

²⁶ *GEOHSA* I p 248. That the Germans received this suggests access to official British data.

entrenched by night. Such methodical tactics were used at Paardeberg. He noted that lateral extension increased low-level responsibility so subordinates must display initiative.²⁷ Finally he stressed cunning and concealment by all ranks, recognising the importance of initiative and fieldcraft. Kelly-Kenny's analysis involved both manoeuvre and more positional tactics. That he stressed initiative is significant; his last experience of combat had been in Abyssinia and it may indicate that there had been a coordinated attempt to introduce more initiative as Chapter 2 suggests.

There are a number of common strands in the above analysis. Firstly tactics had started to change as operations started. Colvile's first instruction suggests that Buller's Memorandum had a positive effect. That fieldcraft, extension, and initiative were stressed from before the war's start suggests recent combat experience had caused these changes. Tirah, rather than the Sudan, was the most likely source.

The Germans suggest that other generals analysed tactics before operations began. On the voyage south Gatacre, Methuen and Clery examined the war's likely course.²⁸ Warren wargamed river crossings, countering Boer mobility and using artillery in close country. He questioned the British ability to outflank the Boers, preferring intense shelling and direct assaults. The British should advance through close country to counter Boer marksmanship.

Tactical Change during Operations

Many commentators have seen British performance in South Africa as very poor. Reality was more complex and in certain ways British training and tactics in 1902 was worse than in 1899.²⁹ Tweebosch in 1902 saw ill-trained, uncohesive troops

²⁷ There are similarities with Roberts' Instruction of 26/1/00; Kelly-Kenny's instruction probably followed Roberts'.

²⁸ *GEOHSA* I pp 71, 130; W Williams *The Life of General Sir Charles Warren* (Oxford 1942), p 253; Ibid p 251 reproducing letter Warren/Wolseley 2/11/99; SM Miller *Lord Methuen and The British Army* (1999), pp 78-9 citing contemporary material.

²⁹ FM Carver 'The Boer War' *JRUSIDS* 144 (1999), p 80.

disintegrate, while Talana and Elandslaagte in 1899 had seen generally good tactics.³⁰ The war's first tactical phase, lasting approximately to Bergendal in late August 1900, was broadly conventional and generally mobile; the second involved very mobile, counter-guerrilla operations, balanced by large static British garrisons on the blockhouse lines.³¹

Talana was a success, marred by the cavalry's poor performance, despite the fact that they had manoeuvred into a potentially decisive position. The infantry attack, made in an extended formation, covered by gunfire, drove the Boers off a potentially strong position. The attack was undoubtedly slower than Symons wished, infantry/artillery communications were poor and the RA felt that their support could have been more effective. Tempo was further lost when Symons was wounded. This also may explain why the artillery did not shell the retreating Boers.³² Still it was a technical victory and hit Boer morale. It was the product in part of good training and Frontier experience. The Germans praised it.³³

Elandslaagte was marked by a high casualty ratio of defenders to attackers. Hamilton, the infantry commander, was a Tirah veteran and commanded 2 battalions with Tirah service. He had practised his brigade in extended-order tactics previously. Cavalry reconnaissance located the Boers.³⁴ The plan combined frontal attack, designed to pin the Boers down, with outflanking by 3 battalions supported by cavalry. Artillery covered the attack effectively; batteries leapfrogged forwards, a tactical innovation. The Devons attacked frontally with 3 companies on a 700-yard front. Contemporary British

³⁰ *Report Lieut-General Methuen ... Tweebosch* (1902), p 4.

³¹ WO 32/8079; *RCWSA Report* pp 72-4. Though troop-densities were low, the lines' lengths meant that overall garrisons were large.

³² Chapter 5; LS Amery *THWSA II* (1902), pp 170-1; Maurice *BROHSA I* p 131 states 10 paces extension. *The Times* 23/10/99 notes magnificent artillery support and effective fire by 2 maxims. 'Men at the Front' *Pen Pictures of the War* (1900), pp 28-9 describes the artillery's advance; *SAD I* p 5; *Ibid* 'Elandslaagte' pp 6-8; Maj Gen Headlam *The History of the [RA] III* (Woolwich 1940), p 316; MURPs 'RA Report Talana.'

³³ Maj Crum *With the Mounted Infantry in South Africa* (Cambridge 1903), pp 1-2. Crum's unit was in South Africa prewar and he stressed their intelligent training, stalking and shooting. He suggests that Symons, the GOC, had influenced this; EPs 8704-35-818 pp 56-7 citing Maj Balck; *GEOHSA I* p 34.

norms would have put nearly 2 battalions on the same distance. Finally cavalry charged the retreating Boers successfully, having outflanked them.

Methuen at both Belmont and Graspan captured Boer positions through a combination of night marches, tactical outflanking, generally extended formations and effective artillery support.³⁵ That the Boer positions were sited on kopjes helped. Consequently the defenders' fire was less effective, while the crests furnished an easy target for British artillery. Methuen was unable to pursue after his victories as he had insufficient mounted troops whose horses were unfit.³⁶ Command failure marred Modder River. Methuen personally advanced too far and was wounded; the ensuing switch of command allowed the Boers to withdraw their guns. Here the Boers changed tactics, abandoning hilltop positions for lower ground which maximised the effects of flat-trajectory fire. At Modder the British found that heavy shelling was necessary to counter greater Boer defensive firepower.

The 3 defeats of 'Black Week' in December 1899: Stormberg, Magersfontein and Colenso were a blow as the early successes had further raised British confidence. Colenso, due to incoherent orders, insufficient reconnaissance, divided command, and a plan with little inter-formation coordination, appears to have been hopeless from the start.³⁷ Indeed some have argued that the battle was intended only as a reconnaissance and not an attempt to relieve Ladysmith. Gatacre's force achieved surprise at Stormberg and, but for poor navigation and the troops' tiredness, caused by bad staffwork, nearly won.³⁸ At Magersfontein a detachment broke through, but poor communications

³⁴ Chapter 2; HPs 3155-33 pp 4-6.

³⁵ Amery *THWSA* II pp 194-5, 189, 184 footnote; Chapter 6; *GEOHSA* I p 80 criticises Methuen for making frontal attacks. At Belmont he tried to outflank, Amery *THWSA* II p 327, similarly at Graspan, Miller *Methuen* p 100, but poor mobility prevented both attempts succeeding.

³⁶ Glossary; Maj Baden-Powell *War in Practice* (1903), pp 121-2 analyses terrain's effect; Maj Gen Smith *A Veterinary History of the War in South Africa 1899-1902* (1919), pp 17, 18.

³⁷ *BROHWSA* I pp 243-4; Williams *Warren* p 360; Glossary; *BROHWSA* I p 259, two batteries fired over 1000 rounds, the war's heaviest daily expenditure by individual batteries, LS Amery *THWSA* VI (1909), p 481; JB Atlay *Lord Haliburton* (1909), p 227.

³⁸ Amery *THWSA* II pp 381-2. Gatacre's division was fragmented, its staffwork was poor, Maj Pollock *With Seven Generals in the Boer War* (1900), pp 58-60, 66-68.

prevented exploitation, while prior bombardment, as at Colenso, prejudiced surprise; Methuen, like Buller at Colenso, failed to use his reserves fully.³⁹

Buller's outflanking move to Spion Kop was slow. Buller disorganised the command system during the operation with adverse results.⁴⁰ A single brigade assaulted the Kop which was exposed to converging Boer fire, while terrain prevented most British pieces from replying effectively. Too many troops were crowded onto the objective, suggesting that senior officers had underestimated firepower, while C3 failures contributed to the defeat.⁴¹ Buller aborted Lyttelton's attempt, skilfully conducted by a KRRC battalion using skills learned on the Frontier, to outflank the Boers enfilading Spion Kop. Vaalkrantz was also fought by one brigade more or less in isolation, though on more favourable ground.⁴² Artillery fire was still poorly coordinated with infantry movement; there were no infantry feints, though artillery deception was used, while Buller failed to persist in attacking. However artillery was centralised and used in mass. Buller's force developed both these tactics later.⁴³

The relief of Ladysmith saw varied tactical performance. Effective infantry/artillery cooperation, massed infantry covering fire, good infantry minor tactics and fieldcraft and inter-formation cooperation ensured the speedy clearance of the Tugela's south bank. Whether Buller was personally responsible for these tactical changes is doubtful.⁴⁴ The second phase saw Buller shift his axis into cramped terrain

³⁹CPs 2/4/12 *Foreign Journals ... South Africa* p 32. Spion Kop and Vaalkrantz were similarly criticised.

⁴⁰ EPs 8704-35-818-54; Ellison blamed Buller's administrative preoccupation; nominally Warren commanded, Coke took over his division yet Buller recommended Thorneycroft, CO of a unit, to command on Spion Kop where at one stage a divisional and 2 brigade commanders were also present. Clery nominally commanded at Colenso, but Buller ordered withdrawal.

⁴¹ B Williams *THWSA* III (1905),p 256; *SKDs* (1902), p 38; *GEOHSA II* (1906), pp 168-70.

⁴² Williams *THWSA* III p 276; *KRRCCC* (1901), p 92, Lyttelton commended their skirmishing, but he was also a rifleman; Capt Wake 'The Capture of Twin Peaks' *KRRCC* (1909),p 125; SWPs 13/23 Hamilton/Wilkinson 8/3/00.

⁴³ Lyttelton's brigade received excellent support, Col Stone *The Employment of Heavy Artillery in the Field* (Woolwich 1909),p 24; Williams *THWSA* III p 314; *GEOHSA II* pp 211,216-8.

⁴⁴Artillery was to open fire once infantry made the Boers to reveal themselves; Maj Gen Maurice *BROHSA II* (1907),p 447 citing 2 Division Order 18/2/00; Williams *THWSA* III , pp 504-6; Amery *THWSA* III pp 504-6 attributes these tactics to Lyttelton. Warren also had stressed fire and direct attacks.

north of Colenso where British combat power was ineffective as there was insufficient room to deploy. Hart's brigade made an isolated attack, poorly supported by artillery, and was penned against the Tugela.⁴⁵ The last attack saw Buller switch his axis to assault Pieter's directly. Here more of his Army could fight, massed artillery could support assaults effectively and observation was easier.⁴⁶ Artillery tactics were changing to emphasise firing until the last minute, with the ranges lengthened when troops assaulted.⁴⁷ Howitzers shelled positions on reverse slopes, defiladed from British guns.⁴⁸ Buller's CRA, Col Parsons, issued special orders and sited batteries personally. Parsons' permanent grouping of batteries improved coordination. Artillery, supported by heavy small arms fire, caused many Boer casualties. Despite this Buller failed to pursue.⁴⁹

Roberts stressed mobility, deception and surprise; his force was more mobile than Buller's, partly because it had more horses and mules, partly because its transport had been reorganised, equipment shed and its mounted troops massed in a division. Roberts took logistic risks, cutting rations in contrast to Buller. French's cavalry operation to relieve Kimberley was based on speed, surprise and a mixture of deception and security, but horsemastership was poor. This damaged mobility later. French's charge at Klip Drift was significant for future tactics.⁵⁰ Contrastingly Buller's operations were sluggish. Roberts admittedly was moving in flatter country but was equally hampered by heat and water shortages and was operating at the end of longer lines of communication.⁵¹ Despite poor British staffwork, Cronje was surrounded at Paardeberg,

⁴⁵ *GEOHSA* II pp 266-7; G Powell *Buller: A Scapegoat?* (1994), pp 173-4 defends Buller's shift. Having seen the ground I am unpersuaded; General Altham *The Principles of War* (1914), p 131.

⁴⁶ CPs 2/4/14.

⁴⁷ *RCWSA Evidence* II p 233. Also seen at Spion Kop, EPs 8704-35-17.

⁴⁸ Maj Molony 'Pieter's Hill: A Tactical Study' *PPCREs* XXX (Chatham 1904), p 264. Boer positions were sited to counter Direct Fire. Glossary, Chapter 4.

⁴⁹ D Reitz *Commando* (1968), pp 86-9; *RCWSA Evidence* II p 661 for Barton's complaint; Churchill *London to Ladysmith* (1900), p 455; Chapter 5.

⁵⁰ Maurice *BROHSA* II, p 16; EPs 8704-35-818-55; Chapter 5; *THWSA* III p 395. Horses and mules were faster than oxen and did not halt for hours to graze, but, unlike oxen, they needed forage supplies.

⁵¹ Chapter 5; Roberts/Lansdowne 16/2/00.

but Kitchener coordinated the initial attacks poorly. Inadequate signals and Kitchener's ambiguous status contributed to this, while it was necessary to attack Cronje immediately to prevent a breakout. But isolated, weak attacks, poorly supported by artillery, failed with heavy casualties. Paardeberg then became a siege in which sapping, night attacks and heavy shelling finally compelled Cronje's surrender. Though this combination was tactically effective, the lesson which contemporaries emphasised most was the manoeuvre which encircled Cronje.⁵²

Thereafter the heavy casualties that his force had suffered in the first assault at Paardeberg largely deterred Roberts from attacking frontally. The major exception was Driefontein, where Kelly-Kenny made a frontal attack, well supported by artillery, and inflicted heavy casualties.⁵³ Roberts' artillery provided poor support at Paardeberg and later at Doornkop. Contrastingly Buller's artillery was very effective from Pieter's.⁵⁴

Roberts' force occupied Bloemfontein and then Pretoria. Due to his numerical superiority and improved mobility, the Boers were unable to resist his advance, but in turn Roberts proved unable to encircle them. In his advance the problems were logistic. Failure to provide sufficient forage killed many animals and disease, exacerbated by scanty rations and limited medical support, many men. As Roberts marched on Pretoria, the Boers adopted guerrilla warfare.

Roberts' and Buller's forces differed tactically; Buller's was obliged to break through. His force was too immobile to outflank as both Colenso and the move to Spion Kop had demonstrated. Consequently it emphasised combat power, particularly massed artillery used close to assaulting infantry. It has been suggested that this was effectively a creeping barrage. Though there were similarities in the synchronisation of fire and movement, there were also substantial differences. Creeping barrages were fired

⁵² Amery *THWSA* III pp 447-51, 452-3.

⁵³ Roberts did not support frontal attacks, RPs 7101-23-110-1 Irish Manoeuvres Memorandum 6/7/99. He was criticised for overemphasising outflanking, *GEOHSA* II pp 337-8; *THWSA* III pp 581, 585.

⁵⁴ B Williams *THWSA* IV (1906), p 144.

Indirect, thus needing careful calculation and planning. Buller's pieces, except the howitzers, fired Direct. Buller's formations concentrated machine guns, sometimes brigading them as at Vaalkrantz, and massed riflemen to cover attacks.⁵⁵ Good Infantry/Artillery cooperation was crucial at Pieter's.⁵⁶

Common failings affected both Buller and Roberts. Both found it hard to synchronise attacks so that formations attacked simultaneously. Poor communications, undertrained staffs lacking common procedures, improvised formations and unnecessary changes of command caused this.⁵⁷ Generals, however capable in smaller expeditions, found it hard to adapt to using staffs. Under both operation orders were poorly written. Both CinCs failed to attack relentlessly.⁵⁸ One can speculate, though not prove, that this partly explains why 1914-18 attacks were continued over-long. The Germans criticised repeated British failures to reconnoitre and to win fire superiority. They felt that the British over-relied on the bayonet and their interarm cooperation was poor. Here Langlois argued that the British did not follow their own manuals.⁵⁹ The Germans condemned British failure to grip the enemy frontally, which would have enabled them to outflank and encircle the Boers, but it was hard to pin mobile, wary foes in open terrain.

In the war's anti-guerrilla phase tactics became less relevant to conventional war except that:

mobility, physical and mental, strategical, tactical and individual seemed to be supremely requisite... [It] will be equally valuable in any campaign of any sort

⁵⁵ CPs 2/4/14 for Warren and Buller's orders. Buller's did not mention artillery, Warren emphasised close artillery support and lengthening ranges as infantry advanced; Powell *Scapegoat* p 173.

⁵⁶ Amery *THWSA* III p 318; Churchill *Ladysmith* pp 435-6 noted similar fire support on the Frontier; Lt Col Keene 'Medium Guns and Howitzers' *JUSII* XXXII (1903); Maj Scales *Artillery in Small Wars*: (Ann Arbor 1976), p 206. Chapter 4; Malony Pieter's, p 268; Table 36.

⁵⁷ Kitchener's position at Paardeberg and Roberts' subordination of Colvile to Hamilton; Williams *THWSA* IV p 89.

⁵⁸ *GEOHSA* II pp 270-1. White was similarly criticised, Amery *THWSA* II p 219. Williams *THWSA* IV pp 410, 412, comments that Roberts' staff system was subject to 'an almost complete breakdown.' His private secretary issued many orders. Roberts' Intelligence staff was unnecessarily disrupted; Williams *THWSA* III pp 453-5, *GEOHSA* II p 287.

⁵⁹ Gen Langlois *Lessons from Two Recent Wars* (1909), p 145. The Akers-Douglas criticised the manuals heavily.

that the future may have in store for us.⁶⁰

This was to be significant as the British developed their tactics after 1902. Both sides introduced mounted charging tactics in this period. Imperial forces had to maintain tempo in pursuing guerrillas. The Boers' firepower was now insufficient to stop mounted assaults and they had to withdraw if they were to survive. Consequently British mounted troops often charged positions.⁶¹ Similarly poor British marksmanship allowed Boers to attack on horseback firing rifles.⁶² This gave ammunition to those who argued that shock was still viable. Raids on Boer laagers re-emphasised night operations' value after the failed night attacks during Black Week.⁶³

That the guerrilla phase was both longer and followed conventional operations, may have led to some of the latter's lessons being underemphasized. But widely dispersed anti-guerrilla operations gave great scope to younger commanders, amongst whom were Haig, Allenby and Gough. South Africa saw a generational change with younger officers coming forward. In contrast Kitchener's attempts to control numerous mobile columns from Pretoria overstrained the communications net and often proved ineffective.⁶⁴

The Guerrilla phase's high mobility was balanced by the construction of some 3700 miles of blockhouses. Initially these were designed to protect railways, but from June 1901 cross-country lines were built to counter Boer mobility. Modern rifles' firepower and the absence of Boer artillery meant that these could be held by 30 men per mile. The men thus saved were available for offensive operations. But dispersal demanded much of junior leaders.⁶⁵

⁶⁰ *GEOHSA* II pp 329-31; *GEOHSA* I p 28; *GEOHSA* II p 328-9,337; E Childers *THWSA* V (1906),p xii.

⁶¹ HWP 6503-39-12 p 1; Lt Col Pilcher *Some Lessons From the Boer War* (1903), p 14.

⁶² *RCWSA Evidence* I p 288; HamPs 2/3/1 Hamilton/Roberts 13/11/01; L Oppenheim 'The Fight at Rooival (50)' *19C LI* (1902), p 910.

⁶³ Childers *THWSA* V pp 329-30; *GEOHSA* I p 28; Belmont, Spion Kop, the Ladysmith sorties.

⁶⁴ Table 25. Capt Grant *BROHWSA* IV (1910), p 338 lists 45 columns operating in the ORC in 4 months.

⁶⁵ *Ibid* p 570; *Ibid* p 572; *Ibid* p 575.

Transport was again reorganised in November 1900 to increase mobility further. This was a reversion towards the regimental system. Roberts issued memoranda on reducing horse-loads and on animalmastership.⁶⁶ Both were critical for mobility and were developed from 1902.

The Immediate Analysis

The Army produced an elaborate series of reports on South Africa. This effort exceeded that carried out immediately after 1918 and was the first major British attempt to gather data systematically after a war. There were four broad categories of report; Army HQ South Africa initiated the first, the WO the second, these were mainly concerned with weapons and equipment, third were works written later such as the Medical and Veterinary Histories. Finally there were individual reports.⁶⁷

Roberts, possibly prompted by Brackenbury, the Director Ordnance, established committees to consider organisation and equipment issues at Pretoria. Reports from the Cavalry, 7 and 11 Divisions, the Provost Marshal, the Lines of Communication, the REs, the Chaplains, the AOD, and Army signals resulted.⁶⁸ No field artillery report survives but Headlam refers to the Pretoria Committee, which examined all categories of artillery. HQ SAFF initiated a report on heavy artillery, probably based on the Pretoria Committee's work. This was later incorporated into the WO Report.⁶⁹

French established 3 boards under Generals Dickson, Broadwood and Gordon to examine respectively: personnel and organisation: equipment: horses and mobility. Dickson's recommendations were most controversial. He criticised both officer and soldier standards, this suggests the Cavalry's manning problems. Better quality personnel would enhance initiative, allowing more extended formations to be used.⁷⁰

⁶⁶ Ibid pp 598-9; RPs 7101-23-111-1 F68 'COSCM 8;' RPs 7101-23-111-2 F663 'COSCM 11.'

⁶⁷ Table 6; eg Grierson's, WO 108/184.

⁶⁸ Dated 9/6/00. Respectively WO 108/250, 108/254, 108/253, 108/251, RE no reference, 108/255, AOD reproduced on WO108/245, WO108/256.

⁶⁹ Headlam RA III, Appendix G; Circular letter 10/11/00; WO 108/266 p 125 et seq.

⁷⁰ WO 108/250 p 3.

French disagreed with their criticisms of officer standards and felt that they were over-harsh on soldiers. Dickson's Board recommended one machine gun per squadron, an RHA battery and 2 pom poms per brigade and another divisional RHA battery. This recommendation would have substantially increased cavalry firepower above prewar norms. Manoeuvre was to be enhanced by an extra squadron per regiment. They did not denigrate shock, recommending that each brigade should have a lancer regiment. They considered that shock was: 'of primary importance.' However they later stressed that a: 'more prominent position must be given to....training ...in the use of the fire weapon.' This generic designation suggests that cavalry might be rifle-armed in future.⁷¹ Dickson recommended brigading regiments: 'as much as possible with RHA.' This would have facilitated inter-arm coordination, making artillery support more effective. He considered that the IGC should limit his activities below brigades. This would give brigadiers more responsibility, thereby encouraging initiative. Musketry should be carried out throughout the year to improve marksmanship. One notes a balance between shock and fire and concern with initiative and interarm cooperation.

Broadwood's board recommended lighter equipment to improve mobility.⁷² Carbines were too short-ranged, so they advocated rifles, while pointing swords should replace the current weapons. They proposed one Maxim per squadron and 2 pom poms per brigade. Gordon's team examined horses, transport and remounts. Their detailed report, commended by French, emphasised mobility. Entrenching tools were to be carried with squadrons, recognising dismounted action's importance. They recommended lightening horse-loads. Carbines were inferior so they stated: 'if a cavalry man is called upon, as he is now, to act repeatedly on foot, he should be armed with a weapon as good as his infantry comrade.'⁷³ All 3 boards urged extra firepower. This

⁷¹ WO 108/250, pp 3-4.

⁷²Ibid p 5.

⁷³ WO 108/250 pp 13,12. French proposed to report seperately on remounts.

was not strictly within their terms of reference, but their joint approach suggests that cavalry attitudes were changing towards dismounted action and increased fire support. Modern theory argues that enhancing firepower increases mobility. Their reports were later carefully analysed in Britain.⁷⁴

The infantry committees stuck more to their terms of reference and consequently are less valuable. Pole-Carew established a committee of all his battalion COs presided over by a brigadier to produce 11 Division's report. This recommended more initiative for company commanders. Three officers were needed per company, demands for MI and staff officers had impaired companies' efficiency, while demands for good soldiers for signalling, MI and other duties were: 'most serious.' Implicitly this recognised the new importance of individuals and initiative, as well as the greater tactical importance of companies. They recommended many improvements to rifles, most significantly cliploading which would increase the rate of fire and lighter, more practical equipment. They stressed the need for more entrenching tools, recognition of protection. All section commanders should carry binoculars, again recognising low-level initiative. They were unimpressed with machine guns, though allowing their defensive value. This is probably due to the fact that Roberts' force was manoeuvring rather than breaking through. The machine gun report contradicted them.⁷⁵

A committee, chaired by a Tirah veteran, drafted the 7 Division report. They felt that entrenching tools should be improved, and cliploading introduced, reservists were undisciplined and punishments on operations were insufficient, but they concluded, rather against the trend of their previous remarks, by recommending more scope for low-level initiative. Their GOC stressed efficient signallers, lighter, more practical equipment and criticised reservists' indiscipline.⁷⁶

⁷⁴ WO 32/6781; Chapter 5.

⁷⁵ WO108/253 pp 5,5-6, 6-10; L/MIL/7/2462 para 29 noted binoculars aided musketry; Chapter 4.

⁷⁶ WO108/253 pp 10-12; 1-2.

The signals and the signals equipment reports are short but significant. Poor communications had caused several defeats.⁷⁷ General Macdonald commented that:

the want of cohesion between co-operating columns, owing to the failure of the system of communications, has been....a very great...cause of the prolongation of the ...campaign.⁷⁸

The Director of Signals noted that: '[t]he present system of organisation is entirely regimental, ...[while] the numbers of trained men.....is inadequate for war purposes.' He complained that *WEs 1898* did not establish signallers at force HQ, the Director of Signals' staff officer, or the cavalry divisional signals officer. Formation HQs needed mounted signallers as marching men delayed mounted staffs. Brigades should have a signals officer and dedicated signallers. Infantry and cavalry units needed more signallers, RHA and RFA units had none, while RGA signallers required extra training. The SAFF had only managed to communicate by robbing units to equip HQs. Macdonald outlined in the report a proposal by his BM, a Tirah veteran, who had seen similar communications problems there, to establish formation telephone-detachments that would provide line down to battalions.⁷⁹

Logistics and transport were examined carefully. The ASC conducted much of this internally and established a new corps magazine to stimulate thought.⁸⁰ Boards of enquiry held after significant defeats also provide tactical data.⁸¹ Whether Buller's force conducted a comprehensive reporting exercise is unclear, there are references to artillery and medical reports, but the only survivor is logistical.⁸² There were many unofficial works analysing the war including works by Callwell, May and Pilcher. But perhaps the most significant was *The Times History*. Written to stimulate reform, it had privileged

⁷⁷ WO 108/256 , WO 108/278 'Spion Kop' p 16; Coke's Memorandum, *RCWSA Evidence II*.

⁷⁸ WO 108/256 p 3.

⁷⁹ WO 108/256 p 3; WO 108/278 p 9 No106; Ibid pp 24, 4-6, *RCWSA Evidence II* Haig Qs 19498-19501.

⁸⁰ *ASCQ I* (1905), p 1.

⁸¹ Eg WO 32/7904 Uitval's Nek; WO 32/7949 'Nooitgedacht'; *RMMISAs I*: 'Whether commanders who meet with a reverse... should face a court-martial?'

⁸² WO108/265 p 21 fn*; WO108/268.

access to official material and serving officers wrote the technical chapters in its Volume VI.⁸³

Conclusions

Smokeless ammunition and extra firepower, generated principally by magazine rifles had altered battlefield conditions greatly. Infantry went into the early South African battles deployed as tightly as 1-2 paces between men. By 1902 they extended up to 30. Fieldcraft became essential against enemy fire and this individual skill combined with dispersion meant that subordinate initiative was vital. Extra firepower became essential to counter enhanced enemy fire. Artillery support had to be coordinated with the Infantry movement, with pieces firing to the last safe moment. Preliminary shelling were shown as pointless, at least on the scale possible in South Africa. Destruction depends on the absolute weight of attack and there were not enough pieces to generate the firepower needed. It should be noted that, though Boer defences were impressive, they were not on the scale of those constructed in Manchuria or Flanders, so there was little need to destroy them. Neutralisation sufficed. It is probably for this reason that the RA remained satisfied with shrapnel as its prime field gun ammunition nature.

Outflanking was stressed from the war's start, but due to Boer mobility and long-range weapons, this failed in many early battles as the British were insufficiently mobile. South Africa's guerrilla phase reinforced the importance of mobility. Night operations were used extensively.

There was a searching analysis of the war, which, as later chapters argue, deeply influenced ideas on tactics and on weapons. Generally mobility was seen as the dominant tactical factor, but it would be wrong to argue that firepower and protection were consequently neglected. As Chapters 4 and 6 show, the Army enhanced its

⁸³ LS Amery *THWSA* VI (1909), p vi.

firepower and protection extensively. A veteran summarised the war's effects: 'Paul Kruger was the best friend the British Army ever had.'⁸⁴

⁸⁴ Maj Gen Ellison 'Army Administration' *AQ* III (1921),p 18.

Chapter 4. Firepower

*Extreme, depressed point-blank or short, end-first or an 'ow,
From Colesberg Kop to Quagga's Poort, from Ninety-Nine till Now,
But what I've 'eard the others the others tell an' I in spots 'av seen,
There's nothin' this side 'Eaven or 'Ell Ubique doesn't mean!*

Introduction

South Africa was the first major war in which almost all combatants carried small-bore flat-trajectory magazine rifles firing smokeless ammunition. It also saw the first extensive deployment of effective machine guns, some QF artillery, HE shells and the first modern British use of howitzers firing Indirect. These far-reaching technical changes increased firepower significantly. This caused profound alterations in the other tactical factors of manoeuvre and protection. Consequently firepower was analysed exhaustively. This chapter examines the lessons and their implementation.

Chapter 3 has examined the state of weapons technology in 1899. Neither side had fully appreciated how much firepower had increased; both were forced to alter their tactics from the start of fighting. Artillery was undergoing the most radical technical change and is therefore analysed in the greatest depth here. Furthermore it was the arm with greatest potential firepower, though Boer rifles caused most British casualties.

The RA in 1899

The RA in 1899 had both strengths and weaknesses. Its officers were recruited from the more able, its organization developed initiative and its unit training was thorough, though sometimes unrealistic.¹ That it was not regimentally-based developed professionalism. It had its own institute and journal, both encouraged study. Infantry and cavalry did not enjoy these advantages.² The RA had developed a field artillery 'doctrine' based on rapid advances and short-range Direct Fire.

¹ Maj Gens Callwell and Headlam *The History of the [RA] I* (Woolwich nd), pp 238-242.

² Brig Bidwell *Gunners at War* (1970), Chapter 3; Glossary.

Though generally suited to Colonial warfare, it was primarily derived from German experience from 1866-1870 and later trials. Scales argues that the RA's tactics were primarily derived from colonial warfare, but it is more correct to say that both had influenced pre-1899 artillery tactics.³

Britain lagged behind France and Germany in its proportion of artillery to infantry. The Army had not fought a well-armed enemy since 1856 and the other arms were ignorant of artillery's power.⁴ Some gunners regarded their arm as technical and therefore a purely artillery matter. The exact reasons for this are unclear but gunners underwent a more intense education than Infantry or Cavalry and historically had been organisationally separated from them. German gunners were equally guilty of this failing.⁵ The RA gave great independence to BCs, while field artillery units were improvised. This unconsciously strengthened batteries. A unit deploying in 1899 was: 'collected - the [CO] from Lucknow, the adjutant from Rawalpindi, and the batteries from Secunderabad, Ahmednagar, and Deesa.' Consequently batteries were unused to cooperating together or with other arms. Tactical performance suffered. In colonial warfare primitive enemies and stretched logistics meant that little artillery was usually needed or could deploy, so this fault was under-appreciated.⁶ Tirah had demonstrated both the dangers of improvised gunner units and the need for effective artillery support, but there was insufficient time for remedial action before 1899.⁷ Furthermore a single artillery unit for a 2-brigade infantry division was clumsy, despite brigade-divisions being the accepted

³ Callwell & Headlam *RA I* pp 255-6, pp i-ii; Prince Hohenlohe-Ingelfingen trans Maj Walford *Letters on Artillery* (Woolwich 1887) was very influential. It was based on 1870's lessons; Maj Scales *Artillery in Small Wars* (Ann Arbor 1976), p 2.

⁴ Table 15; Maj Gen Headlam *History of the [RA] II* (Woolwich 1937), pp vii, 1; Chapter 2.

⁵ They had been under the Ordnance, not the CinC, while gunners were educated at the long-established RMA. Maj Williams-Wynn 'The Brigade System in the Royal Field Artillery' *PRAI* XXXII (1905-6), pp 17-8; Callwell & Headlam *RA* pp 2, 5; LS Amery *THWSA VI* (1909), p 477. Maj Head 'Knowledge of the Use of Artillery' *JRUSI* XLVIII (1904), p 1172; ED Brose *The Kaiser's Army* (Oxford 2001), pp 98-9, Hohenlohe-Ingelfingen *Letters* pp 71-74.

⁶ Headlam *RA III* (Woolwich 1940), p 484; Col Callwell *Small Wars* (1906), Chapter 24.

⁷ Callwell & Headlam *RA I*, p 254; Wolseley felt that artillery units' effectiveness was weakened as many were split between barracks, WO 279/4 pp viii, 7; *ARSG 1899* (1900), p 8.

tactical unit.⁸ The abolition of RFA and RHA signallers in 1899 had further damaged interarm cooperation. A major field artillery concentration only occurred in August 1899 when 17 batteries assembled on Salisbury Plain. But this involved drill rather than tactics and was not an all-arms exercise. Senior gunners were unused to handling artillery in an all-arms setting. This being so, non-RA commanders were likely to be worse.⁹ Consequently integrating artillery into all-arms tactics would be difficult.¹⁰

The RA's weapons were roughly comparable to other European states for as yet only France had developed a true QF gun. British field artillery had been entirely gun-armed until 1896, when, common shell having been withdrawn from field guns, 5" Howitzers were introduced to fire HE. Howitzers were, however, poorly understood even by gunners, insufficient numerically and fired too small a shell to destroy substantial defences.¹¹

In the 1st Boer War little British artillery deployed, its weapons were feeble, while its training and tactics were primitive. By 1899 the RA had made great strides, it had a tactical doctrine and had improved its gunnery. Extravagant expectations were placed on artillery and HE. Many felt that they would offset Boer marksmanship, while some argued that the Boer acquisition of artillery would impair their mobility.¹² This did not happen.

Tactical Characteristics: 1899-1902

Chapter 3 has analysed how new technology enhanced artillery's importance.

South Africa's open terrain and the consequent long engagement ranges further

⁸ *FAD 1896*, p 7; Glossary.

⁹ Maj Head 'Knowledge of the Use of Field Artillery' *JRUSI* XLVIII (1904), pp 1174-5.

¹⁰ RPs 7101-23-188 Col Chamberlain/Lansdowne 28/8/00, voicing Roberts' views; *Artillery Training III War* (1928) defines artillery's aim as cooperation, thus effectiveness would be problematic.

¹¹ Callwell & Headlam *RA I* pp 252-3. *Ibid* p 192. *FAD 1896* had no tactical guidance on howitzers.

¹² Capt Thuillier *The Principles of Land Defence* (1902), p 187; LS Amery *THWSA VI* (1909), p 477. Boer heavy artillery was remarkably mobile.

increased this. But the country's size, the resulting logistic problems, combined with poor routes, partly counterbalanced its greater effectiveness.

The Boers were generally better marksmen than the British, and paid great attention to entrenchment and concealment, aided by smokeless powder. Boer artillery tactics emphasised dispersal, use of cover, extreme-range fire and preservation of their pieces ahead of tactical effectiveness. British officers assessed these tactics as realistic in view of their numerical inferiority, but they were eccentric by European standards. Boer artillery ammunition was unreliable, while poor training meant that their fire often failed. An RA committee cautioned:

[t]hey look upon the Boer War as having afforded much experience and many valuable lessons but some of the conditions were exceptional. The war afforded no experience of how large numbers of well-served guns firing accurate time shrapnel are to be dealt with. This ... will inevitably occur in a European war.¹³

Professor Travers has criticised British reluctance to learn from the war. Here their reasons are articulated.

The Boers deployed siege guns in field operations, contrary to conventional orthodoxy. Poor ammunition, inadequate training and their gunpowder propellant made them largely ineffective, but they were demoralising and had to be countered. This demanded long-range fire so RN, later heavy RGA, guns deployed for this task. This was unusual for an Army which traditionally had used lighter weapons in the field. Heavier weapons were also better suited to destroy defences. The British had trialled attacking Boer-style defences with artillery and small arms. British artillery grew in calibre during the war to tackle both tasks and by mid-1900 the Army was convinced that:

South Africa shows conclusively that in future wars a proportion of heavier

¹³ Headlam *RA II*(1937),p 112. At Ladysmith British casualties from artillery were small, despite fire converging, *RCWSA Evidence I* p80. Boer fuzes were unreliable. Spion Kop was the only battle in which Boer artillery had a substantial effect. But this was due to terrain and the British plan rather than Boer tactics, Amery *THWSA VI* pp 467-8,479; WO 33/192,p 3.

guns than our present field gun, as well as howitzers, will be required.¹⁴

The war revealed that British field guns were inferior to Boer pieces in range and rapidity of fire.¹⁵

The RA was constrained as, except in Natal, combat was at the end of long, low-capacity logistic chains, reliant forward of railhead on animals. This prevented prolonged shelling, even though heavy ammunition consumption by contemporary standards sometimes occurred.¹⁶ The Boers' long, narrow firing lines and concealed trenches were poor targets for shrapnel. Nor could the weight of HE needed to destroy defences be generated as there were few HE-capable pieces. Generally, however, the neutralising effects of shrapnel proved adequate against Boer defences. Lanchester blamed the limited effectiveness of British artillery on Boer dispersion and very open terrain; his first point is valid, but the latter is wrong. Open terrain favours artillery.¹⁷

The main small arms lessons stressed snapshooting and independent fire. Dispersed enemies using fieldcraft made both essential. At long ranges artillery was more effective than rifle fire. The British criticised the fact that the Lee-Metford was not cliploading. They felt that cavalry needed rifles, while machine guns should be tripod not carriage-mounted. The latter were very visible and hence very vulnerable.

Implementing the Artillery Lessons

Introduction

The following sections examine how artillery was enhanced. The changes were

¹⁴ Maj Gen Hughes *Open Fire* (1983), pp 56-7. As late as 1917 the British had a lesser proportion of heavy artillery than the Continentals; Brig Bidwell and D Graham *Fire-Power* (1982), p 96. The Indian Army, however, used heavy artillery in the field, Amery *THWSA VI* p 475; Table 38; L/MIL/7/1558-66 India/London 17/5/00; *REJ XXX* (1900), pp 194-5..

¹⁵ PRO/30/40/3 Maj Forster/Everett 27/7/00; WR 3; PRO 30/40/16 'Untitled Memorandum Weapons.'

¹⁶ Amery *THWSA VI* pp 492-3, the war's total artillery ammunition expenditure, some 2800 tons, was nearly equalled by one corps in 2 days in 1917, Lt Gen McNaughton *The Development of Artillery in the Great War* (nd) p 18.

¹⁷ FW Lanchester *Aircraft in War* (1916), pp 86-7. The question is covered in the Glossary. Chapter 6 examines Lanchester's deductions on fieldcraft.

made in several ways, by altering organisations to match them with other arms, by increasing numbers, by altering the mix of guns and howitzers and by tactical changes. Training also improved. A later section covers the development of new equipments.

Increasing Artillery

British artillery was substantially increased from 1900. This reflects not just the lessons from South Africa but the fact that European warfare was now seen as more likely. Wolseley had long argued that Britain had too little artillery and the Army Board, prompted by Brackenbury, stated in December 1899 that the number of available pieces was: 'dangerously low.'¹⁸ Grierson calculated that, in Roberts' advance to Pretoria, British norms demanded 26 batteries but there were only 17.¹⁹ But as the Boers had little artillery, this was less significant in relative terms. However, as the absolute weight of gunfire is a key dimension when destroying or neutralising defences, the deficiency was potentially important.²⁰ Repington felt that greater enemy firepower demanded more artillery support. Maj Bethell breezily summarised a key lesson: '[t]o storm an ordinary position, bring up plenty of artillery; to storm a strong position, bring up all the guns you can.' Col Vincent saw insufficient British artillery as a critical weakness. He also condemned its inadequate range and firepower.²¹

The Army decided to increase artillery to European norms of 5-6 guns per 1000 men in mid-1900. The Infantry Division's artillery doubled to two artillery units in 1902. Now there was one artillery unit per brigade. This would be likely to improve

¹⁸ *RCWSA Report* Appendices D-II p 214 and D-VI 'Col Lloyd;' WO 108/307 pp 115-6.

¹⁹ WO 108/184 p 94.

²⁰ Bidwell & Graham *Firepower* p 289. This may explain Lanchester's comment above on open terrain, he possibly meant areas. Amery *THWSA* VI p 485 notes the ineffectiveness of British HE at destroying Boer trenches. Though there were technical problems with Lyddite, there were also too few pieces to achieve this.

²¹ 'Suggestions from the Front. Lessons of the War' *19C XLVIII* (1900), p 710; 'Duncan Medal Essay' *PRAI XXIX* (1902-3), p 141; 'Lessons from the War' *USM XXIV* (1901), pp 28,34; Table 15; Glossary.

inter-arm cooperation as the organisations matched. Secondly corps artillery was strengthened with twelve 4.7" or 5" heavy guns, increasing both the range and weight of fire. Between 1900-1904/5 field artillery increased substantially. Haldane cut batteries later, but the British ratio of pieces to men was as great as any other major power in 1914.²²

Infantry/Artillery Cooperation

Improving infantry/artillery cooperation reflected the need to counter increased defensive firepower qualitatively as well as quantitatively. Buller stressed that the maximum weight of covering fire synchronised with infantry movement was vital in attacks. Major Caunter criticised:

promiscuous shelling of the enemy ..., whilst the infantry remained out of the fire until the defenders were considered to have been sufficiently shaken, proved worse than useless... We learnt ...that ... artillery preparation and the infantry attack should be very nearly simultaneous.²³

But there was an important caveat; there were no elaborate defences that had to be destroyed before assaults were delivered, while there was sufficient artillery to neutralise the Boer positions at Pieter's and Bergendal. Both these battlefields were of limited extent which meant that the British deficiency in absolute numbers of pieces was not critical. Lt Col Murray commented bluntly: 'infantry cannot carry a position in the face of the modern rifle unless assisted up to the last moment by artillery fire.' The lesson, demonstrated in Tirah, had been insufficiently stressed before 1899.²⁴ Some gunners criticised their own arm: '[i]n this campaign we... have been at our worst in supporting infantry in attack.' Gunner Powell noted: '[w]ant of combination between infantry and artillery conspicuous. Field Artillery offering assaulting columns no support.' That a private saw the problem suggests its scale.

²² L/MIL/7/10139 'WO letter 5/7/00;' Table 20.

²³ BULPs 2065 M/SS4/18 'Draft Nov 1900' p 2; Caunter *Free State*, p 33.

²⁴ *RCWSA Evidence II* p 328; *IDB 1896*'s S 113 includes artillery, S 114 machine guns. But it does not mention intense fire till the last safe moment synchronised with movement. S 124 para 10 and S 53 are vague on infantry covering fire, while p 125's reference to 'masking' implies that fire till the last moment was seen as impossible for technical reasons. In 1900 risks were taken. Glossary.

Furthermore it occurred during a critical attack. Callwell stressed synchronising shellfire and infantry movement. There were many reasons for poor inter-arm cooperation in South Africa. These included formation commanders' ignorance of artillery, insufficient inter-arm training, the lack of RFA signallers and the SAFF's organisational disarray.²⁵ Nor had the prewar manuals emphasised inter-arm cooperation and close support for as long as safely possible.

Despite the above problems, Buller's Force, which fought a series of battles generally involving frontal assaults on strong positions, forged a system which gave close, effective infantry support. Field guns, heavy artillery, mountain guns, howitzers and small arms supported the attack at Pieter's. This was the first time that the RA had used such a range of weapons to tackle an entrenched position. The parabolic trajectories of howitzers were particularly effective for searching into trenches and cover.²⁶ Fire was kept up for as long as possible, Buller saw RN guns firing their last rounds: 'three feet in front of the leading men,' while 2 West Yorks asked for fire till the last moment and suffered several casualties in consequence. The weight and concentration of fire were far greater than at Colenso.²⁷

Improving artillery/infantry cooperation took time and the exact originator of this change is hard to establish, if indeed there was one man. Warren, GOC 5 Division, had advocated heavy gunfire to cover frontal assaults, while Buller's final CRA on the Tugela, Col Parsons, was very important. Parsons re-established artillery communications and sited his artillery where its fire would be fully effective. Ranging and target identification occurred before the attack, and Parsons

²⁵ Maj Callwell *The Tactics of To-day* (Edinburgh 1900), p 111; Ed D Martin *Duelling With Long Toms* (Ilford 1988), pp 26-27 dated 24/2/00. It is a reprinted diary; Maj Callwell 'Artillery Notes From The Veld (sic)' *PRAI* XXVIII (1901-2), p 283.

²⁶ Headlam *RA* III p 404; Maj Callwell 'The Training, Organisation and Equipment ... of the [RGA]. ...' *PRAI* XXVIII (1901-2), pp 129-30; *FAD* 1896 pp 6-7.

²⁷ *RCWSA Evidence* II Q15475; RH Davis 'The Relief of Ladysmith' *SM* XXVIII (1900), p 48; Capt Dawnay 'Artillery and Infantry in the Final Stages of the Attack' *JRA* XXXV (1908-9), p 51; written at Camberley, it contains DS comment. *THWSA* VI Part II p 481 stresses effective infantry/artillery cooperation in the later Natal battles; Table 36.

devised a system of reference points to control and thus concentrate fire.²⁸ He insisted that batteries observed the advancing infantry continuously, thus enabling the following tactic to be used:

[a]s soon as it becomes dangerous to continue firing at the line about to be rushed, the guns should slightly increase their range...so as to bring their projectiles to bear on the ground immediately to the rear.... Nothing can be worse than for the artillery to cease firing ...when the infantry have....to charge.²⁹

Consequently the infantry assaulted while the enemy were still suffering from the shelling. Lengthening the range interdicted either reinforcement or retreat. A Boer described the results:

[w]e saw the ridge ... going up in smoke and flame. Of our Pretoria men ... not one came back... The British had blasted a gap through which the victorious soldiery came pouring.³⁰

Scales argues that Bergendal was the key battle for infantry/artillery cooperation, but he does not demonstrate any significant tactical development from Pieter's.³¹

After 1902 officers stressed that: 'infantry advancing is dependent for ... support on [artillery] fire.'³² *FAT 1902* highlighted infantry support, explaining the combination of shrapnel-firing guns neutralising and howitzers searching into trenches. It contained new instructions:

[i]n order to cooperate with the infantry ... the artillery commander must be thoroughly acquainted with the general's plan of attack. He must accompany the latter in his reconnaissance ... and must receive precise instructions as to the role which the artillery is to carry out.

These would enhance infantry/artillery cooperation greatly. *IDB 1896* had been

²⁸ WW Williams *The Life of Sir Charles Warren* (Oxford 1941),p 251. Williams quoted from Warren's contemporary papers; Maj Callwell 'A Heavy Battery at the Relief of Ladysmith' *PRAI* XXVII (1900-1),p 142; *SAD* II (1901),pp 44-5. The batteries enfiladed the Boers.

²⁹ *SAD* II (1901),p 43; Maj Hamilton-Gordon 'Fourteen days Howitzer work on Service' *PRAI* XXVII (1900-1),p 358; Maj Callwell *The Tactics of To-day* (1900),p 114.

³⁰ D Reitz *Commando* (1929),pp 87-8. This is secondary but A Conan Doyle *The Great Boer War* (1900),pp 291-2 supports it; Doyle's book was sent to Boer prisoners who felt that he had underestimated Boer casualties from artillery at Pieter's, 'Boer Critics on "The Great Boer War"' *CHM* XI (1901), p 297.

³¹ Scales *Artillery*, pp 232-3. The main target at Bergendal was the tip of a salient angle. This accident of ground meant that artillery was more effective than at Pieter's; Lyttelton makes the point, *WO* 279/9 p 129; *SAD* II pp 102-3.

³² Eg Maj Crowe 'Duncan Medal Essay' *PRAI* XXVII (1900-1),p 286.

vague on measures to ensure cooperation, contrastingly *FAT 1902* stated:

‘employment of artillery ...depends entirely on the [overall commander’s] general plan.’³³ Tactical integration of infantry and artillery had increased. *FAT* also emphasised concentrated fire during the assault more than *FAD* did. *FAT* saw some friendly casualties as tactically preferable to ceasing fire prematurely, which would allow enemy infantry to fire freely on the attackers. This was a major innovation. Training directives and manuals accentuated artillery and other arms cooperation down to 1914.³⁴ Fire support was not just a lesson for artillery; an Infantry officer commented:

We have at last begun to recognise that fire and movement are ... closely connected with each other... In order to move forward, co-operating, or covering fire from artillery and infantry is absolutely necessary.³⁵

But infantry/artillery cooperation remained difficult until the introduction of RT.

Concentration of Fire

Artillery concentration is another qualitative means of increasing firepower. Though the number of pieces may not increase, fire is massed on tactically-key targets and is thus more valuable than an equal weight scattered over less important targets. Prewar tactics had collocated artillery in great lines of batteries to generate the necessary concentration. South Africa’s first conventional phase confirmed this need, as Col Davidson commented:

The greatest tactical requirement of the Artillery is that the CRA may have the means of concentrating the fire of as many guns as possible, on the key to the enemy position at the psychological moment.³⁶

But physically massing batteries firing Direct was tactically undesirable. It made concealment harder; there was less chance of enfilading the target, while CB from hidden enemy pieces was likely to be very effective on the exposed weapons.

³³ *FAT 1902* p 13; *Ibid* p5 start of ‘S3 General Principles.’ *FAD 1896* p 3.

³⁴ *IDB 1896* p 116; *FAT 1902* p 12; *Ibid* p 13.

³⁵ Col Doran ‘The Co-operation of Artillery and Infantry.’ *JLR II* (1911),p 168.

³⁶ Gen Hamley *The Operations of War* (Edinburgh 1900),p 435; *RCWSA Evidence II* p 367.

Callwell criticised:

the fetish of massing guns because the Germans adopted this method But in the present...everything points to the dispersion of artillery to the utmost extent possible, and to no bigger unit than the battery being.... at one particular spot.

Here Callwell reveals 1870's persisting tactical influence, while Roberts foresaw that:

50 or 60 guns concealed... over 2 or 3 miles of front would be able to destroy 100 equally good guns massed together.'

This suggests how tactical changes can negate numerical superiority; it also confirms Lanchester's comments on fieldcraft's powerful effects.³⁷ The solution was to disperse batteries, thus making them easier to hide and complicating enemy CB, while concentrating their fire on targets.³⁸ Furthermore such fire would, as contemporaries observed, be more effective as it was converging. This in turn meant that long-range weapons were more useful. Dispersed gunlines obliquely encouraged Indirect Fire.³⁹

FAD 1896 had emphasised physically massing artillery to attain concentration of fire:

batteries must be sufficiently concentrated to be worked by one commander. If the guns be dispersed, their effect will be successive and not simultaneous.

FAT 1902 was less prescriptive, seeing that there were many cases where dispersal was practical, though it still saw physical concentration as probably still necessary.⁴⁰

The Committee drafting *FAT 1902* had wished to emphasise co-locating pieces more strongly, but Roberts insisted that, if cavalry and infantry were extended, artillery must also be dispersed. Roberts insisted that officers with initiative: 'should be able to concentrate the fire of their guns as well if batteries and sections are separated as if

³⁷ *Tactics*, p 109; Glossary; RPs 7101-23-124-3 F646 21/11/02; Chapter 6.

³⁸ Maj Crowe 'Duncan Medal Essay' *PRAI* XXVII (1900-1), p 284, he stressed C3; Glossary.

³⁹ Glossary. The longer the weapon range the more fire could be concentrated. Intervisibility issues encouraged Indirect Fire as Direct Fire is rarely possible over 3000 metres in NW Europe.

⁴⁰ *FAD 1896* p 4; *FAT 1902* pp 5,6 while pp 3-4 suggests less physical concentration; the senior Gunner of an army's duties contain less stress on personal command of massed artillery than *FAD 1896* p 3 does.

they are all huddled close together.’⁴¹ *FAT 1902 (Amended 1902)* outlined the technicalities of concentrating the fire of dispersed batteries. This and instructions on using directors were the main changes from *FAT 1902*.⁴² That *FAT* was replaced in its year of publication suggests that these changes were both urgent and important. By 1903 General Marshall, Roberts’ ex-CRA, recommended that:

[p]rovided, however, control of fire can be kept, every latitude should be allowed a commander to disperse ... in accordance with the tactical situation and the ground.⁴³

Roberts appreciated that concentrating fire from dispersed batteries meant that: ‘[s]ignalling is essential. It was a mistake giving it up in the Artillery and should be reintroduced as soon as possible.’⁴⁴ The RFA reinstated signallers in 1903, Maj Geddes described their training, the communications network, the resulting ability to concentrate fire and to communicate with infantry and superior HQs. Wood at the 1903 Manoeuvres concentrated the fire of 76 pieces on key targets using RA signals.⁴⁵

Dr Marble concludes that the RA became disillusioned with concentration after 1902. It is argued that his assessment is incorrect. Firstly he overemphasises the guerrilla phase, which saw artillery widely, but correctly dispersed. Secondly Kitchener’s abolition of the GOCRA South Africa’s post was justified. Marshall was required in Britain, while there was no likelihood of massed artillery being used in action. Thirdly the organisational changes, described later, saw formation and RA unit powers increase after 1902.⁴⁶

⁴¹ RPs 7101-23-122-3 Roberts/Ian Hamilton 4/4/02.

⁴² *FAT 1902 Amended* pp 93-4,99-102. This is the only instance of an important manual being replaced in the same year that I am aware of. Roberts’ intervention may have caused this; Glossary.

⁴³ Capt Wilson ‘Dispersed Artillery’ *USM XXVI* (1902),pp 296-8; *RCWSA Evidence II* p 365.

⁴⁴ RPs 7101-23-124-3 ‘Minute on Tactical Training RHA&RFA’ 21/11/02.

⁴⁵ ‘Communication between Artillery units in action’ *PRAI XXX* (1903-4); WO 279/516 ‘Preliminary Trg II Corps ...1903’ p 14. But it is easier to move notional than real shells!

⁴⁶ Dr Marble *The Infantry cannot do with a gun less* (KCL 1998),pp 15-16; WO 27/504 ‘Artillery Report Salisbury Plain’ p 1.

Adopting concentration took time to bed-in because traditions of battery independence and other arms' beliefs that artillery was so technical that gunners alone could comprehend it had to change first. It is not argued that field artillery immediately adopted a monolithic structure, but the C³ necessary for more centralised fire control began to emerge. Also Buller's introduction of single gun tactics at Aldershot was quickly countermanded.⁴⁷ If Dr Marble's contention is correct this would probably not have happened. He is undoubtedly correct to identify weaknesses in concentration, C³ and tactics. Even compared to 1916 these were primitive. But the trend was towards centralised C³, unit and later formation-directed training and concentrated fire, which Parsons had stressed in 1901 on Salisbury Plain. Here it is the trend which is more important than the temporary weaknesses. But manoeuvre, which the British stressed increasingly after 1902, demands some artillery decentralisation.⁴⁸

Artillery Organisation

Concentrating fire, discussed above, demanded that artillery was reorganised. Tirah had taught that haphazardly assembled batteries were less effective than cohesive units. This problem recurred in 1899-1900 and Headlam, a senior RA staff officer, was convinced that:

The Lieutenant-Colonel commanding a Brigade-Division must be given the administrative powers of a [CO] of Cavalry or Infantry...[T]he very looseness of the tie which binds the batteries to him only encourages the rupture of that tie and the dispersion of the batteries.⁴⁹

Headlam shows here how organisations affect tactics. Permanent artillery units encouraged concentration. Brigade-divisions were formalised in 1900. This was not

⁴⁷ BULPs 2065/M/SS4 /18-Item 2 pp 3-4.

⁴⁸ Maj Gen Bailey *Field Artillery and Firepower* (Annapolis 2004), p 34. In manoeuvre, artillery decentralisation allows quicker reactions at the expense of overall effect. In 1918's mobile combat decentralisation occurred, with medium pieces deployed forward with units, Brig Gen Edmonds *MOFB 1918 IV* (1947), pp 445, 516. T Travers *How the War Was Won* (1992), pp 150-1 cites 1918 advocacy of Direct Fire for its greater responsiveness; *ARSG 1901* (1902), pp 13,14.

⁴⁹ HedPs 'Folder Centralization ... RHA and RFA,' p 5.

immediately successful as some COs tended to allow their BCs considerable licence while remaining aloof from their training. But units whose COs became involved did better tactically at practice camp.⁵⁰ A similar change was seen in coast artillery which saw the responsibility for training switch from the School of Gunnery to the tactical commanders.⁵¹

Marshall commented after South Africa that: 'it has been quite common for a general to be ignorant of the elementary principles of artillery.' This suggests how defective the training of senior infantry and cavalrymen had been. Col Davidson, French's senior horse-gunner, lamented that there was no established cavalry CRA.⁵² It was necessary therefore to tackle the problems of other-arm ignorance of artillery and to establish artillery commanders in formations. The latter would educate their GOCs on artillery. On 1 January 1903 artillery units were incorporated in infantry divisions under the GOC's command. This would improve inter-arm cooperation and would also force divisional commanders to understand their artillery. Permanent divisional CRAs were not instituted till 1907. But senior officers pressed for their establishment beforehand and temporary appointments were made for manoeuvres.⁵³ Probably finance caused the delay as, until the formation of the large infantry division with its stronger artillery, it was uneconomic to establish them. But, as Pieter's demonstrated, CRAs substantially improved artillery's effectiveness and inter-arm coordination.

Cover and Concealment

Smokeless ammunition's tactical effects for Infantry have been outlined already; its implications for artillery were as important, for as Lanchester argued, concealment and cover are force-multipliers. Gen Marshall commented: '[t]he value

⁵⁰ *ARSG 1901* (1902), p 9.

⁵¹ *Headlam RA II* p 310.

⁵² *RCWSA Evidence II* p 366; *Ibid* Qs 18672&18700.

⁵³ WO 279/516 'II Corps Report 1903' p 14; WO 27/504 'Aldershot Staff Tour 1905' p 3.

of cover and the power of concealed guns, rendered practicable by smokeless powder, has come out strongly [in South Africa].’ Maj Ducrot remarked:

the vital necessity of concealment is one of the lessons of the war; and the “deliberate method” of coming into action ... should be practiced more than ever.⁵⁴

FAD 1896 had viewed cover as the last priority in selecting gunlines; *FAT 1902* urged:

[t]oo much importance cannot be assigned to the concealment of guns, not only ... in action, but when advancing into action. By skilful use of ... ground and natural features..., the presence of ... artillery may often be concealed ... until fire is opened; and even after that if the positions ... have been well chosen, especially if it be practical to employ indirect laying... In this way it is possible to compensate for inferiority of ... number.⁵⁵

Before the introduction of Cordite, the ‘Deliberate Method’ occupying gun positions had not been worth the extra time required as the first round fired betrayed the pieces’ positions. Despite smokeless ammunition having been introduced as the principal propellant well before South Africa, the RA had not adjusted their tactics to emphasise concealed movement. Now this changed.⁵⁶ The quotation also suggests the greater importance of Indirect Fire from 1900. It contradicts General Bailey’s judgement that the RA had: ‘less intention of firing indirectly than it had before the Boer War.’⁵⁷ It also suggests why artillery duels were less likely, though *FAT 1902* did not delete them entirely.⁵⁸ The defending artillery could evade guns shooting Direct either by reserving fire till enemy infantry assaulted or by firing Indirect. Parsons when IGRA India insisted on cover and concealment in training.⁵⁹ This suggests a shift towards appreciating greater enemy firepower and the need for more advanced tactics.

⁵⁴ *RCWSA Evidence* II Q 18596; ‘Guns in South Africa’ *PRAI* XXVIII (1901-2), p 203; Glossary.

⁵⁵ *PRAI* XXVII (1901-2), pp 279-80; *FAD 1896* p 12; *FAT 1902*, p 6.

⁵⁶ *PRAI* XXVII (1901-2), pp 276-7, p 280. *FAD 1896* pp 14-5 downplays the Deliberate Method. *FAT 1902* p 12 stresses covered advances; Headlam *RA* II p 48; Glossary.

⁵⁷ Bailey *Artillery*, p 223.

⁵⁸ *FAT 1902* p 12; it was not so described but may be inferred. But *FAT* noted that the inferior defending artillery could avoid duels; *Ibid* pp 17-8. Callwell disparaged duels, *Tactics* p 107.

⁵⁹ L/MIL/7/10839 ‘LAR 1903-04’ p 3.

Howitzers

Howitzers are important due to their links with Indirect Fire, which dominated artillery tactics from 1914. That the RA emphasised howitzers more from 1900 suggests that gunners now understood that they would have to shell trenches, structures and engage defiladed targets more often. This suggests greater appreciation of changing battlefield conditions.⁶⁰ Two distinguished authorities, Generals Bailey and Scales, both ex-artillerymen, have misappreciated the influence of South Africa on howitzers and Indirect Fire. General Scales criticises the RA's handling of howitzers in 1899-1902, implying gunner conservatism as the cause. To understand his case and to provide context for this section, it is necessary to examine howitzer tactics in the Sudan, the first operational use of the 5" Howitzer.

Scales criticises flat-trajectory howitzer fire at Omdurman, but breaching walls was technically best done so.⁶¹ Emslie, the BC there, cautioned that his howitzers were used for: 'quite exceptional' tasks, which would not: 'normally fall to ... [them].' Amongst these he included wall-breaching.⁶² Emslie did not use Indirect Fire, but there was no CB threat at Omdurman, while signalling from observers to the gunline would have slowed firing. Finding a gun position in flat country that provided the necessary defilade for Indirect Fire and which was close to the Nile would have been hard.⁶³ Emslie was aware of howitzers' ability to search into cover, continuing:

[i]f carried out, as it very likely may be from hidden positions, it will be most difficult to deal with, and must inevitably cause modification in the tactics both of infantry and artillery... It will therefore probably form part of [howitzer] tactics to fire as far as possible from behind ... cover.

Scales considers that Emslie demonstrates RA conservatism. In fact Emslie clearly

⁶⁰ 'RFA' The History and Present Position of the Field Howitzer. Present Position II' *USM XXV* (1902),p 273. However howitzers had a substantial shrapnel ammunition scale.

⁶¹ Scales *Artillery* p 198; Glossary; the last occasion in 1944 that the RA breached fortress walls, gun-howitzers fired Direct at point blank, *The [RA] Commemoration Book* (1950),p 113.

⁶² 'The Possible Effect on Tactics of Recent Improvements in Modern Weapons' AMS (1899),p 6.

⁶³ *Ibid*, his howitzers were landed from barges and fired from near the Nile.

recognised Indirect Fire's implications, not just for Artillery, and that his Omdurman tactics were unsuited to modern warfare.⁶⁴

Scales claims that Emslie caused Maj Hickman's pamphlet to advocate Direct rather than Indirect Fire for howitzer batteries in South Africa.⁶⁵ The pamphlet only mentions Emslie briefly and makes no claims for his Omdurman tactics except simplicity. Contrastingly it praises Hamilton-Gordon, who had developed Indirect Fire techniques. Scales does not produce evidence for his claim, further stating that Hickman's pamphlet was for: 'all howitzer batteries on service.'⁶⁶ His claim is surprising. The *PRAI* version states: '[t]hese papers were written for the use of Lt Col Waldron's Howitzer Brigade-Division.'⁶⁷ Waldron's was not the only howitzer unit in South Africa. Hickman recommended that Waldron's batteries used Direct Fire because of:

the very small amount of training [of Waldron's unit] and ... the possibility of the batteries [undertaking] tasks ... not... hitherto considered as coming within the role of howitzers.⁶⁸

Indirect Fire, as Scales acknowledges, required lengthy training, so, given that the decision to arm Waldron's unit with howitzers was taken in mid-December 1899, it is hard to see how else it could have been operational in early 1900.⁶⁹ Scales also criticises Hickman for not recommending an FOO with the attacking infantry. The pamphlet states: 'someone belonging to the Battery should advance with the infantry ... and be responsible for giving the signal [to cease fire].' This suggests an officer

⁶⁴ The RA trialled wall-breaching in Egypt beforehand; it is unclear whether Emslie attended; Headlam *RA* III p 244; Glossary; Emslie 'Effects' pp 5, 7, 6-9.

⁶⁵ Scales *Artillery* pp 202-3; this thesis uses the version, *The 5th BL Howitzer Technical Considerations and Fire Tactics* reproduced in *PRAI*s XXVII (1900-01). There was clearly a stand-alone pamphlet possibly used by Scales which may explain the discrepancy.

⁶⁶ Scales *Artillery* p 202. Hickman's work was copied to Hamilton-Gordon, '14 Days Howitzer Work' *PRAI* XXVII (1900-1), p 362. This would seem to be a sensible staffwork, enabling howitzer BCs already deployed to understand the new batteries' tactics.

⁶⁷ 'The 5th BL Howitzer. Technical Considerations and Fire Tactics in the Field' *PRAI* XXVII (1900-1).

⁶⁸ *Ibid* pp 23-4. Hickman's views on Direct v Indirect Fire were balanced but, due to insufficient training and weak Boer CB, he recommended Direct Fire for the newly armed batteries.

⁶⁹ WO 32/7887, 16/12/99 p 3. Brackenbury suggested howitzers, WO 108/307 p 104.

with an FOO's responsibilities and communications.⁷⁰ Also Scales' argument is partly based on incorrectly assuming that Hamilton-Gordon's battery was in Waldron's unit and would therefore be constrained by Hickman's pamphlet.⁷¹

Scales attributes the fact that Roberts abandoned all his howitzer batteries on the advance to Pretoria to howitzers' failures at Magersfontein and Paardeberg.⁷² But Roberts retained 6" and 9.45" heavy howitzers. Technically they were not in batteries, being RGA, but they represented substantial howitzer firepower. Major MacMunn, the source of Scales' comment, was serving with a unit and was therefore poorly placed to know Roberts' reasons. A more plausible explanation was not prejudice, but mobility, Roberts' force had to cover large distances but the 5" was relatively immobile, its ammunition was heavy, though its shells were relatively ineffective, and there was limited transport. Battering Pretoria's forts, a likely task, would need heavier howitzers than the 5". Scales also cites Hamilton-Gordon on Roberts' anti-howitzer prejudice, but more or less simultaneously Roberts requested more 6" Howitzers.⁷³ Also Hamilton-Gordon was serving as a BC in Natal and was therefore poorly placed to understand Roberts' motives. Grierson, a gunner on Roberts' staff, criticised the immobility and short-range of 5" Howitzers and their inferiority to 6" Howitzers. These were substantial, specific reasons rather than generic criticisms of all howitzers. Later Grierson recommended arming divisions with howitzers.⁷⁴

Scales attributes the post-war disdain for howitzers to their failures at

⁷⁰ Scales *Artillery* p 203; Hickman *Technical Considerations* p 29.

⁷¹ Scales *Artillery* p 204; Capt Kenyon 'The Boer War 1899-1900 Part I' *PRAI* XXVII (1900-1), pp 77, 79, Hamilton-Gordon's 61 Bty was in Lt Col Barker's Brigade-Division, deployed in 1899.

⁷² Scales *Artillery* pp 246-7 citing Maj MacMunn 'Concerning the Field Howitzer' *PRAI* XXIX (1902-3), pp 314-5. MacMunn did not produce evidence for his statement and somewhat contradicts himself by reporting other arms' confidence in howitzers. 'Lessons of the War-IV Artillery' *The Times* 4/1/01 blamed Methuen's ignorance of artillery for failure at Magersfontein.

⁷³ RPs 7101-23-124-3 F37 4/8/02 Roberts later had 5" howitzers withdrawn from South Africa due to their weight and short-range, but there was no tactical requirement to destroy major defences then; HGP MS 117; *RCWSA Evidence I* p 82.

⁷⁴ WO108/184 p 92; *Ibid* p 102.

Magersfontein and Paardeberg, but does not provide contemporary evidence of such views. Both battles were unsuited to howitzers; one being a silent night attack, albeit with a prior bombardment, the other involved uncoordinated, hasty attacks. Here Kitchener's initial attack must be separated from the subsequent siege. Only one howitzer battery was initially present at both actions and the weight of fire needed to destroy defences could not be generated.⁷⁵ Stretched logistics prevented heavy bombardments at Paardeberg. Gunners, however, attributed Cronje's surrender to the 6" Howitzers' fire.⁷⁶

There were very real reasons why howitzers were not fully effective in South Africa. They were frequently misemployed as field guns to engage unsuitable targets, but the SAFF was short of artillery. Hickman had anticipated this by recommending Direct Fire for Waldron's pieces. Howitzer units and batteries were often divided; this made Indirect Fire harder as there were insufficient signallers and specialists to direct it.⁷⁷ Despite the problems which Scales mentions, the RA began the war with 3 field howitzer batteries and ended with 12. Though there was a shortage of guns, this increase does not suggest general hostility to howitzers.⁷⁸ A paper available to General Ardagh recommended that the ratio of field guns to howitzers should be 2:1. The 1899 ratio was 5.5:1. Furthermore India wished to raise its proportion of howitzers in 1901 demonstrating that Scales has overstated hostility to howitzers.⁷⁹

Scales claims that there was much criticism of howitzers at the RCWSA but he only cites Hannay-Rainsford and does not provide any details. A commissioner

⁷⁵ Having seen both battlefields, it is clear that the areas were too large for one howitzer battery to be effective. This can be checked against *The Official History's* maps.

⁷⁶ Scales *Artillery* p 245, LS Amery *THWSA* III (1905), pp 431,475-6; he suggests that the 6" howitzer bombardment on 26/02/00 was decisive p 482. Infantry attributed surrender to their night attack.

⁷⁷ Maj Gen Stubbs 'Some Operations about Slinger's Fontein' *USM* XXIII (1901), p 502. From the RA distribution in Appendices to Headlam *RA* III, it seems that no howitzer unit had all its batteries together. This meant that there would be no CO to explain their special abilities authoritatively, while splitting batteries damaged their Indirect Fire ability.

⁷⁸ Maj MacMunn 'Concerning the Field Howitzer' *PRAI* XXIX (1902-3), p 314.

⁷⁹ PRO 30/40/16 'untitled memorandum on weapons;' It is unclear for whom it was written; Table 20; WO 32/6771 'India Military Despatch 44 21/3/01,' 36 of the 126 new pieces were to be howitzers

contradicted him: '[w]e have had a good deal of evidence in favour of howitzers as against guns of lower trajectory.'⁸⁰ Nor is Rainsford-Hannay listed as a witness and Scales' page citation does not apparently exist.⁸¹ That a civilian commissioner recognised curved trajectories' tactical value suggests that opinion was shifting towards howitzers. Checking the RCWSA's index shows that no individual criticised howitzers directly. Several witnesses praised them, notably Hunter, Stopford who stressed their value against shrapnel-proof trenches, and Hilyard.⁸² Warren criticised 5" Howitzers' short-range but noted their effect on trenches. All had served in Natal, suggesting that Buller's force, which included Hamilton-Gordon's well-trained battery, valued howitzers more than Roberts' force. But Roberts commended Hamilton-Gordon, even though the latter had served in Natal.⁸³

Roberts recommended developing a new field howitzer. Clearly he had no prejudice against howitzers in general. Col Davidson praised 5" and 6" Howitzers, but diagnosed that further training was needed for greater efficiency. That a senior horse-gunner commended them, suggests a cultural shift. The RHA' tactical ethos was based on simple, dashing Direct Fire, sharply at variance with Indirect Fire's complexity. Marshall acknowledged 5" Howitzers' good work in Natal, when well handled, praised Hamilton-Gordon and recommended developing a new field howitzer. As late as 1906 Lyttelton, then CGS, praised Hamilton-Gordon's battery.⁸⁴ Gunners criticised the 5" Howitzer's short-range, light shell and heavy weight. They saw the 6" Howitzer's range was inadequate; it was cumbrous, requiring a platform, and fired heavy shells. But these were specific, not generic criticisms of all

⁸⁰ Scales *Artillery* p 246; having checked against *QAL Apr 1904* pp 3110 & 1966, Scales has transposed his name; *RCWSA Evidence II* Q 18551.

⁸¹ *RCWSA Evidence I* pp vii-xii, *Ibid II* pp iii-x, *RCWSA Report* p 284. Scales *Artillery* p 246 cites *RCWSA*, p 455 no volume specified.

⁸² This it is emphasised depends on the index's accuracy; *RCWSA Evidence II* Q 14655; Admiral Lambton Q 19134; Qs 16693-4; *Ibid* p 235.

⁸³ *SAD I* (1901), p 23.

⁸⁴ *RCWSA Evidence II*, Q 15850:Q18628; Q 18508; p 364; WO 279/9 p 129, Lyttelton had commanded formations in Natal.

howitzers.⁸⁵ Many Boers considered the 5" Howitzer as the best British artillery weapon, while British veterans viewed the Krupp howitzer as theirs'. Significantly one of those agreeing was Lt Col May, an ardent horse-gunner.⁸⁶ May also advocated howitzers and Indirect Fire, though he criticised the 5" Howitzer's short-range. Several RFA officers praised them.⁸⁷ This suggests that not all RFA and RHA officers were prejudiced against howitzers, while the RGA had long advocated siege-howitzers rather than siege-guns.

Scales does not cite criticisms of howitzers in the military press after 1902. Had anti-howitzer views been rampant even in the RA only, one would expect such views to have been common. Indeed the reverse appears the case. Capt Wilson remarked: 'the tenor of all recent changes seems to be a plea for the more general use of howitzers.'⁸⁸ He deduced that the greater use of cover would favour them and recommended more howitzers than heavy guns with field forces.⁸⁹ As early as 1901 Lt Col Rodwell deduced that howitzers would become more important.⁹⁰ Repington praised howitzers and noted their effectiveness against trenches. That an infantryman and senior staff officer appreciated this suggests that thinking non-gunners were starting to recognise howitzers' increased importance.⁹¹ Hamilton-Gordon's postwar career again suggests lack of prejudice. He was appointed to the committee on the new artillery equipments, developed Indirect Fire techniques and briefed the 1908 GS Conference on howitzers. That the Army developed a new howitzer, based on South African experience, shows that, despite sharp criticisms of 5" Howitzers, there

⁸⁵ Maj Nicholls 'The Training, Organisation and Equipment ...[RGA]' *PRAI* XXVIII (1901-2),p 104.

⁸⁶ *JRUSI* XLVI (1902),p 1358; WO 108/266 pp 136,154,156.

⁸⁷ *A Retrospect of the South African War* (1901),pp 131-3. He analysed Boer howitzers lengthily, Ibid pp 135-7; Maj Ducrot 'Guns in South Africa' *PRAI* XXVIII (1901-2),p 205; Maj Crowe 'Duncan Medal Essay' Ibid, p 283.

⁸⁸ 'Is Field Artillery Obsolete?' *USM* XXVII (1903),p 495.

⁸⁹ 'Essays on Artillery III. Cover and Concealment' *USM* XXV (1902),p 379.

⁹⁰ Lt Col Rodwell *Reflections on the Boer War* (Meerut 1901),p126.

⁹¹ 'Suggestions from the Front' *19C* XLVIII (1900), p 708; WO 33/192; WO 279/18.

was now recognition of howitzers' value.⁹²

The non-artillerist may feel that howitzers have been over-examined. But in view of their close connection with Indirect Fire, the latter's importance between 1914-18 and errors in the historiography, they demand careful analysis.

Indirect Fire

General Bailey argues that Indirect Fire was one of the most significant tactical developments of the 20th Century. This judgement is valid, but he also states that South Africa had little influence on the RA's adoption of it. Therefore any evidence of field artillery's greater use of Indirect Fire after 1900 is significant.⁹³ It was closely connected to howitzers; their parabolic trajectories were well suited for it, unlike guns' flatter trajectories. Hitherto most field gunners had been averse to Indirect Fire. Now attitudes started to change. MacMunn outlined Indirect Fire's tactical benefits in his winning Duncan Medal essay. An RFA officer, stressing the importance of reverse slopes, commented: 'I strongly endorse your correspondent who says we should pay more attention to indirect fire (sic).' Callwell underlined: '[t]he value of indirect laying for all classes of artillery is now very generally recognised.'⁹⁴ May stressed its tactical advantages, though noting that it was slow; this caused difficulties when engaging moving targets. He also analysed locating enemy artillery firing Indirect.⁹⁵ May was a leading RHA theoretician; his commendation of a slow, scientific process, at variance with the dashing tactics typical of horse artillery, suggests changing attitudes. Furthermore he was a Camberley DS and well-placed to influence the future elite. Du Cane felt that Indirect Fire was slow and indecisive, but argued that circumstances might demand

⁹² Maj EG Nicholls 'Duncan Medal Essay' *PRAI* XXVIII (1901-2), pp 104-5; WO 33/192, pp 8-9.

⁹³ *The First World War and the Birth of the Modern Style of Warfare* (Camberley 1996); fn 60 above.

⁹⁴ *ARSG 1899* (1900), p 8; 'Duncan Medal' *PRAI* XXVII (1901-2), p 275; Lt Col Harrison 'RA In South Africa' *Ibid*, pp 604-5; 'The Training, Organisation ... of the [RGA]...' *Ibid* p 125.

⁹⁵ *Retrospect* pp 122-4, 133. That enemy artillery was likely to fire Indirect suggests that it was valuable. In turn this would have compelled British use of Indirect Fire.

its use. His criticisms were largely based on the fact that the instruments then used for Indirect Fire were primitive.⁹⁶ Lt Col James also noted Indirect Fire's ability, combined with longer ranges, to allow dispersed, hidden pieces to concentrate fire.⁹⁷ Not all were convinced; Maj Bethell felt that Indirect Fire was unpopular in South Africa due to its slowness. This was probably due to poor training, divided howitzer units and inexpert signallers.⁹⁸

Indirect Fire had other advantages. No longer was it necessary for each gunlayer to identify his target. This was a great advantage as ranges increased, while CB was hard against pieces firing Indirect.⁹⁹ The implications for the artillery duel have been considered above. *FAT 1902* had significantly more on Indirect Fire than *FAD 1896* and trials proceeded from 1901 to develop it.¹⁰⁰

Heavy Artillery

Traditionally the RA had emphasised light weapons in the field. Why this was so is beyond the scope of this thesis but it was probably due to the difficulties of shipping heavy weapons and their teams overseas. South Africa demonstrated that heavy guns were needed to attack positions, conduct CB and provide long-range fire. The calibre of artillery in South Africa increased substantially during the war. The mobility of both Boer and their own heavy weapons impressed the British. For the first time MT moved heavy artillery into action. Several officers speculated on the future of MT towing pieces, while a committee examined heavy artillery. The Pretoria Committee's heavy artillery sub-committee had recommended heavy weapons for use in the field. Roberts, with long service in India where it had been regularly employed, was sure that: '[n]eglect to supply ... heavy artillery, sufficiently

⁹⁶ Glossary, 'Cover and Coopération' *PRAI*s XXX (1903-4), pp 361-2.

⁹⁷ *Modern Strategy* (1904), p 169. James' emphasis on Indirect Fire was not in his 1903 edition.

⁹⁸ 'Duncan Medal Essay' *PRAI* XXIX (1902-3), p 145.

⁹⁹ As ranges lengthened target indication became harder, *ARSG 1900* p 17, *ARSG 1901* p 15.

¹⁰⁰ *FAT 1902* pp 77-80, 97-101; *FAD 1896* pp 93-5. *FAT* pp 97-101 appears to incorporate some of Hamilton-Gordon's work, Headlam *RA II* pp 45-6; Lt Col Hamilton-Gordon 'Observation of fire from a flank' *PRAI* XXIX (1902-3) describes trials. That one of *FAT 1902 Amended 1902*'s main changes inserted Directors, used for Indirect Fire, suggests that there was more than before 1899.

mobile to accompany the troops in the field' was a major fault.¹⁰¹

Long-range Fire

Improved propellants, open terrain and Boer marksmanship encouraged long-range fire in South Africa. This strengthened artillery relative to the other arms and of Indirect compared to Direct Fire. Artillery ranges in South Africa were excessive and long-range fire there rarely inflicted many casualties. However *FAT 1902* foresaw that engagement ranges would grow. Fire at practice camps steadily lengthened. Roberts saw the new German QFs firing at 4800 yards. Tactically longer-ranges meant that artillery was becoming more powerful, forcing enemies to deploy earlier, widening the choice of gun positions and hitting deeper into enemy lines.¹⁰² It also increased the ability to concentrate fire. Longer-ranges forced the RA to improve its optics and also demanded more efficient coordination with the other arms and better C³.

The Mix of Weapons

Wartime demands for close support, Indirect Fire, engagement of structures and defiladed targets, and long-range fire meant that no single weapon could fulfil all these tasks. Gunners therefore deduced that a range of weapons was needed. This suggests greater understanding that combat was becoming more complex. It partly contradicts scholars who have criticised field gunners for their obsession with Direct Fire and shrapnel.¹⁰³ May advocated an RHA and an RFA QF field gun, a field howitzer, a heavy gun and a pom pom. Marshall agreed, but excluded pom poms.¹⁰⁴ The British introduced 2 QF field guns, one for cavalry, the other for infantry

¹⁰¹ 'Duncan Medal Essay' *PRAI* XXVII (1900-1), p 283; Maj Callwell 'A Heavy Battery at the Relief of Ladysmith,' Ibid p 138; Tables 37&8; May *Retrospect* p 143; Maj Bethell 'A Motor Field Battery' *PRAI* XXVII (1900-1); WO 108/249; WO 108/266; *RCWSA Evidence I* p 430. Ibid Q 10564

¹⁰² Head 'Desirability' p 1175 on wasteful long range fire; such fire became more efficient during the First World War and perhaps more critically between 1939-45 when RT and C3 had developed, Bidwell *Gunners* p 97. Longer ranges strengthened Indirect Fire as in Western Europe intervisibility is rare over 4000 metres, *DOAE Engagement Ranges Study*; Amery *THWSA VI* p 478; Tables 22&23; RPs 7101-23-122-2 F 126 Roberts/Lansdowne 16/8/01; Table 22.

¹⁰³ Lanchester *Aircraft* p 19; S Marble 'RA Doctrine 1902-1914' *WSJ II* (1996), p 97.

¹⁰⁴ *RCWSA Report* p 93.

support, a field howitzer and a heavy gun. Field guns would support other arms; howitzers would attack material and engage defiladed enemies, while heavy guns would shell distant targets.

The New Weapons

QF Artillery

The Boer War occurred at a significant stage in artillery development. QF artillery was emerging and its status in South Africa is more complex than has been suggested. Boer field guns were technically superior to British ones, outranging them, a significant disadvantage in open terrain. They used fixed ammunition, consequently firing faster than British pieces.¹⁰⁵ British experts during the war assessed that some of these guns were QFs. Postwar analysis appeared to confirm this.¹⁰⁶ In fact they were wrong; the French 75mm was the first true QF field gun.

Controversy exists as to whether the RA used QF field guns. Some of the weapons, which Professor Spiers claims as QF, were in practice not when used in the field. RN guns on improvised carriages could not be fired at QF rates due to excessive recoil forces, while ammunition availability constrained platform-mounted pieces. But the RA manned QFs on armoured trains and pom poms.¹⁰⁷ The Elswick Battery was described as QF; its weapons were ex-naval guns firing fixed ammunition. Whatever the exact position, Roberts concluded that:

South Africa has shown... that [our] Artillery material [was] considerably behind other European states. Our field gun ... was wanting in range and rapidity of fire.¹⁰⁸

¹⁰⁵ Capt Wilson 'Essays on Artillery II. Long-Range Fire' *USM XXV* (1902), pp 267-8.

¹⁰⁶ Capt Wilson 'The War. The Future Of Our Artillery' *USM XXI* (1900), p 572; WO 33/235, p 389 describes the Boer 75mm Creusot and the 120mm Krupp Howitzer as QF; this was a postwar technical report on captured weapons; Lt Col Bethell *Modern Artillery in the Field* (1911).

¹⁰⁷ EM Spiers 'Rearming the Edwardian Artillery' *JSAHR* 57 (1979), p 171; WO 108/266 pp 12-3. Platform-mounted RN 4.7s theoretically could fire at QF rates, but logistics probably prevented this: WO 132/10 'RN Report of Operations 2/3/00.'

¹⁰⁸ RPs 7101-23-122-7 F663 12/7/04; Lt Jones RNR 'The Elswick Battery in South Africa' *JRUSI XLV* (1901), pp 993-4; *RCWSA Report* p 90.

The RCWSA did not agree, but the British were well aware of European progress.¹⁰⁹

Professor Beckett argues that European developments, rather than South African experience, caused Britain to introduce QF weapons.¹¹⁰ His argument is based on assuming that the British did not face QFs in South Africa. Technically he is probably correct, although pom poms were QF, but it is argued here that what contemporaries believed at the time is more significant than a retrospective assessment of enemy weapons.¹¹¹ Furthermore any professional observing British inferiority in South Africa and being aware of European developments would have concluded that Britain needed QF weapons urgently. Rearmament was urgent in view of a threatening international situation. Consequently Britain ordered several batteries of German QF field guns in 1901. Roberts established a committee to examine QFs in 1901. It benefited from the Pretoria Committee's and Brackenbury's efforts.¹¹²

The QF Field Artillery Programme

Brackenbury began examining the introduction of QF field guns in early 1900.¹¹³ Though his precise motive remains unclear, Brackenbury was keen to incorporate operational experience in the new weapons and devised the questionnaire sent to South African units on weapon performance there. The Committee on Horse and Field Artillery produced specifications, largely based on South Africa, against which manufacturers were asked to develop solutions.¹¹⁴ These indirectly emphasised Direct Fire by limiting the pieces' elevation and by requiring fixed

¹⁰⁹ CW Dilke 'The Report of the War Commission' *JRUSI* XLVIII (1904), p 225 criticised the RCWSA for not emphasising QFs; Capt LR Kenyon 'QF Field Equipments on the Continent' *PRAI* XXVI (1899); WR 3 examines Boer technology.

¹¹⁰ *The Victorians at War* (2003), p 237.

¹¹¹ Whether the pom pom was a gun is debateable, but it was QF and suggested the trend of future artillery technology; Glossary.

¹¹² WO 33/192; AFPs 50314, 'MGO's Minute 24/12/04.' Roberts was warned of the intention to develop QF field artillery and invited to collect information on 5/3/00. This may have triggered the Pretoria Committee's establishment. WO 33/235 for technical intelligence on Boer QFs.

¹¹³ AFPs 50314 'MGO's Minute' 24/12/04.

¹¹⁴ WO 33/192; Headlam *RA* II, p 73; Chapter 9.

ammunition. For the RHA the prime characteristic was mobility, for the RFA firepower was. The latter's shell weighed 18.5 lbs and was substantially heavier than its Continental equivalents. Both guns had shields and considerably longer ranges were specified.¹¹⁵ Dr Marble has criticised the RFA's choice, but the 18 Pounder's characteristics were similar to its continental equivalents.¹¹⁶ Though the RA has been criticised for not switching to Indirect Fire earlier, French and German weapons were not inherently more suitable. Both fired fixed ammunition and the 75mm, with its lesser elevation and higher muzzle velocity, was technically less capable of Indirect Fire than the 18 Pounder.

The RA specified that shrapnel was to be the only ammunition nature for the new field guns. This presupposed warfare en *ruse campagne* in which opponents would have little time to dig deeply. Consequently field guns would not need to shell material often, while the RFA also had HE-firing howitzers. But Dr Marble's assertion that shrapnel was unable to neutralise trenches is wrong. It was, indeed may even remain more efficient at suppression than groundburst HE.¹¹⁷ Furthermore shrapnel was the prime French and German field gun ammunition nature. Dr Marble's criticisms of the RA are misplaced. RA policy conformed to European norms and, unlike the French, British infantry divisions included howitzers which were technically more effective at firing HE than the French 75mms.¹¹⁸

There was, however, controversy over the RFA's weapon. Many gunners had been impressed by the mobility and firepower of heavy artillery in South Africa.¹¹⁹ They argued that, though mobility was important, the 18 Pounder had sacrificed

¹¹⁵ WO 33/192; 6000 yards shrapnel; Glossary.

¹¹⁶ Marble 'RA' pp 91-2. Table 25.

¹¹⁷ RCWSA Appendices pp 195-8; Marble Gun p 19. Bidwell Gunners pp 23-4; Glossary.

¹¹⁸ Marble Gun p 12; Glossary, however the RA failed to tackle HE fuze's problems.

¹¹⁹ Capt Powell 'How a Field Gun of Greater Power might be used equal to the 5" BL Howitzer' PRAI XXVII (1901-2), p 63.

firepower for excessive speed. Roberts nearly altered its specifications in favour of a slower weapon firing heavier shells.¹²⁰

The resulting QF programme involved manufacturing 966 guns, 2898 wagons and some 1,000,000 rounds. The Treasury wanted to prolong the process to smooth expenditure, Arnold Foster was unhappy that the 18 Pounder differed significantly from its European equivalents but the Army was adamant that the programme went ahead.¹²¹ The AG argued that the weapons were based on more recent combat experience and consequently should not imitate the French or Germans. Unusually the Treasury was defeated, this, at a time of retrenchment, shows that soldiers and statesmen realised firepower's importance. The total cost, £3,436,000, was a major item in the equipment budget.¹²²

New Heavy Artillery

The Army specified that its new heavy gun would fire as large a shell as possible about 10,000 yards and weigh some 4 tons. By virtue of being a gun it was consequently optimised for Direct Fire, and, though it fired HE, it also had a sizable scale of shrapnel. Its tactics were largely based on South Africa. The RA's emphasis on heavy guns after 1902 and the development of what was to become the 60 Pounder were unfortunate in retrospect. The RGA had long seen heavy howitzers as more suitable for attacking structures and howitzers were better able to deliver HE. 1914-18 demonstrated howitzers' greater tactical importance. But the RA did not ignore heavy howitzers completely.¹²³ Brackenbury began developing an 8.5"

¹²⁰Brig Gen Wolfe-Murray 'Do We Require Field Artillery?' *PRAI* XXIX (1902-3), p 219; RPs 7101-23-122-6 Roberts/ Brackenbury 20/12/03. Roberts cited Wolfe-Murray, arguing against the 18 Pounder. Brackenbury persuaded Roberts to support it: Ibid F90 Roberts/ Kitchener 8/1/04.

¹²¹ AFPs 50314 'Proposed Letter on Delay New Gun 5/1/05,' p 2; Ibid 'The New Field Gun.'

¹²² WO 33/392B p 91.

¹²³WO 33/379 states that this basic specification was provided by Roberts' telegram of 20/8/00. The Pretoria Committee probably advised him. Roberts reiterated the specification but preferred the 5" to the 4.7" gun, L/MIL/7/1565 'Enclosures to Despatch 3 11/1/01;' *Heavy Artillery Training (Provisional) 1903*. This emphasised dispersion and operating in sections; *Siege Artillery Drill 1891*, p 48. The technical arguments are in the Glossary. Col Simpson 'Heavy Artillery 1903' *PRAI* XXXI (1904-5), pp 234-5.

howitzer but this failed due to mobility problems.¹²⁴ Development of a new field howitzer started, while the 6" Howitzer had its range extended to 7000 yards. There were financial limits on what could be done when the Army's field guns needed replacement. However criticisms of complete failure to develop heavy howitzers after 1900 are off-target.¹²⁵

Summary

The development of a range of weapons, which for the first time was driven by user specifications, suggests a greater desire to match technology and tactics, as well as a more doctrinal approach. That a substantial part of the Army's budget was spent on QF field artillery shows the importance the Army attached to firepower. Weapons embody tactical assumptions and the prime deduction is that the new guns, using Direct Fire and firing shrapnel were best suited to supporting manoeuvre. But howitzers were not neglected and their enhanced position suggests a new realisation that tactical conditions were now more complex.

FAT 1902 and Training

The new manual, *FAT 1902*, incorporated some of the tactical lessons which South Africa had taught. These included more emphasis on Indirect Fire, concealment, use of ground and dispersed positions. The work was transitional, not all lessons were included, eg its guidance on howitzers was sketchy. This was understandable. The RA was developing its own QF weapons and time was needed to assimilate both South Africa's lessons and experience from the recently bought German QFs. But there was one absolutely new element, the inculcation of flexibility. *FAT 1902*'s Preface emphasised:

While the details of drill ... must be strictly adhered to, officers must understand that a book of this description ... cannot be expected to legislate for the varying contingencies of active service. To meet these officers must depend

¹²⁴ WO 33/235 'Report Ordnance Co 1901; WO 33/299 'Report Ordnance Co 1903.'

¹²⁵ Headlam *RA II*, p 246; Gen Farndale *A History of the Royal Regiment of Artillery* (Woolwich 1986), p 2 is unaware of the 6" Howitzer's post-1902 modification.

upon ... initiative, self confidence and resource... The attainment and development of such powers is the object of military training.¹²⁶

Greater emphasis on training complemented *FAT 1902*. Artillery training areas were much extended with the addition of Salisbury Plain in 1901. This allowed far more freedom to manoeuvre and thus greater tactical realism. Parsons, Buller's ex-CRA, the first commandant of the Salisbury Plain range emphasised:

The importance of reconnaissance and scouting; the amount of latitude allowed to [BCs] in their choice of position...; the desirability of taking a broad view of the drill book and using their own common sense in situations not legislated for in the drill book; the value of concealment both in approaching and occupying a position; the value of an eye for ground; the importance of training and quickening the general intelligence of all ranks.¹²⁷

This contrasted with the prewar stress on regularity and drill. Parsons continued teaching these points in India.¹²⁸ Greater realism prevailed in training:

The great importance of cover is not yet properly appreciated. It was constantly pointed out to battery and section commanders... and towards the end of the practice great improvements in the way cover was made use of were manifested. It is hard for officers to disabuse their minds of the idea that perfect line and dressing are of the first consideration, seeing how much for years past this has been impressed on them.

This also suggests that, even in the RA, whose organisation fostered initiative, drill had deadened initiative. Reducing competitive firing allowed more tactical shooting. For the first time COs trained the batteries which they would command in war. Another advance was the concentration of batteries for training, which occurred first in Ireland in 1903. This meant that more facilities were available, officers got more practice in observing fire and unit training was enhanced. Parsons introduced similar changes in India.¹²⁹

Training facilities were improved. An artillery range was acquired in Wales and Glen Imaal, bought in 1899, proved, after its extension in 1904, to provide very

¹²⁶ *FAT 1902* p iii.

¹²⁷ L/MIL/7/10839 'IAR 1901-2' para 9.

¹²⁸ *ARSG 1901* (1902), p 13; L/MIL/7/10839 'IARs 1902-3 and 1903-4.'

¹²⁹ L/MIL/7/10839 'Annual Report RA India 1901-2' para 9. Lt Col Du Cane's article 'Cover' was written following Roberts' criticisms of the RA's poor use of cover on the 1903 Manoeuvres; Headlam *RA II*, pp 48-9.

realistic terrain. The RA introduced more realistic targetry including indistinct Boer-style trenches. Engagement ranges in training lengthened. This and the new, more realistic targetry made indicating targets to individual gunlayers harder, obliquely encouraging Indirect Fire.¹³⁰

Training is the practical extension of doctrine, and the changes in training outlined above were probably as significant in improving artillery's effectiveness as *FAT 1902* or the new weapons. Realism, initiative, interarm cooperation and the strengthening of COs' and later CRAs' responsibilities for training had powerful effects across the RFA.

Indirect Fire Training

RHA and RFA gun batteries were using more Indirect Fire in 1901 than they had in 1899. The distinction that these batteries were gun-armed is important; howitzer batteries, as was suggested earlier, were more likely to have used Indirect Fire. In 1901 the Okehampton Commandant was critical:

The drill in indirect laying showed a slight improvement on last year, but in many cases it evidently does not form part of the regular routine of the training of the battery...More attention should be given to the details of indirect laying and firing from behind cover.

This may have been directed at howitzer batteries only, though the document did not specify that this was the case, while only 3 howitzer batteries fired at Okehampton in 1901. But: 'many cases' implies more than just three batteries firing.¹³¹ However the 1900 Report is clear that field guns had fired Indirect and that RHA batteries would have done so if they had had the correct instruments. Also in 1900 the Glen Imaal report emphasised:

Much more attention should be paid to [Indirect Fire], and a higher standard should in future be attained in it.¹³²

¹³⁰ *LMIL/7/10839 'IAR 1901-2'* p 3 noted longer ranges and harder targets at practice camps. Table 21; Glossary.

¹³¹ *ARSG 1899 (1900)*, p 8; *ARSG 1901 (1902)*, p 6.

¹³² *ARSG 1900 (1901)*, pp 8-9; *Ibid* p 17.

The 1899 Report had not mentioned Indirect Fire. Furthermore all the pieces firing at Glen Imaal in 1900 were guns. Had there been a switch to howitzers in 1900, this alone might have accounted for the introduction of Indirect Fire. In 1901 Parsons, assisted by Hamilton-Gordon, directed the Salisbury Plain camp. Parsons stressed the need to improve the: '[p]rocedure for firing from behind cover.' In 1901 Okehampton also saw considerable use of Indirect Fire; the Commandant recommended that Indirect Fire stores were issued to gun batteries. Glen Imaal also reported in 1901 that Indirect Fire practices were more successful than in 1900.¹³³

In India field batteries fired Indirect in 1902-3 and 1903-4. Parsons, the Indian IGRA, encouraged this:

Considerable strides were made at Home last year [1902] owing to the use of experimental instruments for the direction of fire at unseen targets... I am glad to see that the same spirit has spread to India... The increased use of Indirect Fire may have a tendency to make batteries slow. I see from the Reports... that this is the case... Every step should be done quickly and then the end will be quickly attained.

Indirect Fire further increased in Indian practices in 1904-5, though Parsons was still dissatisfied with the results.¹³⁴

General Bailey is wrong to assert that there was less Indirect Fire after South Africa than beforehand. It is not possible to prove that South Africa was the cause as 1899 practice camp reports mention it. But despite this, Parsons' stress on it in 1901 suggests that it was used more in training because of South Africa. That Parsons had Hamilton-Gordon as one of his staff supports this conclusion. The issue of directors, essential to Indirect Fire and the reissue of *FAT 1902*, both in 1902, support this conclusion.

Infantry Firepower

Unlike artillery, major technological change had already occurred with the deployment of magazine rifles. Consequently the Infantry firepower lessons were less

¹³³ *ARSG 1901* (1902), p 17; *Ibid* p 8; *Ibid* p 19.

¹³⁴ *L/MIL/7/10839 'IAR' 1903-04* pp 6-7; *'IAR' 1902-03* pp 1-2, 4-5; *Ibid 'IAR' 1904-5* pp 3-5.

significant than the artillery's. Small arms technology was not as dynamic and, though technical changes occurred after 1902, the most significant developments involved tactics and training. The largest quantitative increases were the Cavalry's adoption of rifles and the doubling of unit machine guns.

Machine Guns

Brig Gen Baker-Carr stated that the Army deprecated machine guns before 1914, while Lt Col Hutchinson claimed that after 1902 they: 'regained [their] former unpopularity.'¹³⁵ Contemporary evidence is far more positive, despite the fact that some machine guns used in South Africa were unreliable or carriage-mounted. The latter made the weapons very vulnerable. Also the Boers were poor targets due to their fieldcraft and reluctance to assault.¹³⁶

Despite these adverse factors, veterans were very positive about them. Hilyard emphasised that the: '303 Maxim has done good service, and will do better now we have the tripod.' Lt Col Thorneycroft brought his own machine guns to South Africa and submitted a detailed report, commended by Buller, while a cavalry CO cleared a stoppage personally. This suggests that not all cavalrymen were technophobes.¹³⁷ Senior officers were generally positive. Brig Gen Burn-Murdoch saw machine guns as: 'useful at long ranges,' significant in view of South African terrain, while Brig Gen Gordon noted: 'the effect is... great,' recommending one per squadron.¹³⁸ Both were cavalrymen. Buller remarked that all COs: 'like these guns...On the whole [machine guns] were very useful,' General Cooper concluded: '[i]t is hard to exaggerate the value of machine guns.' Coke noted their suppressive effects, while FW Kitchener emphasised:

¹³⁵ *From Chauffeur to Brigadier* (1930), p 71; *Machine Guns* (1938), p 73.

¹³⁶ WO 108/267; *Ibid* sers 7 p 20 and 2 p 19 respectively; General Cooper noted that hilly Natal reduced machine gun lethality. Also *RCWSA Evidence II* Q 14343. Methuen noted that South Africa, like Tirah, was unsuitable for machine guns. Not all guns were carriage-mounted, see WO 108/307 p 16, the Army Board had recommended tripods on 31/8/99.

¹³⁷ WO 108/267.

¹³⁸ *Ibid* sers 1,17; Table 12.

if understood tactically, the machine gun dominates the whole question of attack in the future ..., [T]he lost opportunities, owing to neglect of [their] proper tactical use... was the most important lesson of [1899-1902].¹³⁹

Many criticised unwieldy carriage-mounted weapons.¹⁴⁰ Many Guards officers serving under Methuen in more open terrain than Natal consequently distrusted them.¹⁴¹ Most officers saw their role as defensive with the significant exception of those serving under Buller who felt that machine guns could cover attacks. Machine guns appear to have been used most effectively at Pieter's.¹⁴² A CO stated: 'a battery of Maxims (4) completely silenced a Boer trench and Maxim,' while Lt Col Campbell noted:

At the start of the war, I with others, thought that a Maxim was useless in the attack, but...in this country, Maxims, if properly handled can be brought into the firing line and assist an advance by overhead fire.¹⁴³

Campbell had not studied *IDB 1896*, which outlined their use in attack. Tirah had demonstrated this practically.¹⁴⁴

Future senior officers were positive; Allenby reported machine guns as: 'very effective...I should like to have one per squadron.' Byng commented: 'the effects.... have been excellent,' De Lisle concurred.¹⁴⁵ All were to be cavalry generals, again suggesting that the arm was not technology-averse. The general mounted arm consensus was that machine guns should be tripod-mounted and pack-borne. Though pack-carriage was more laborious than vehicle-transport, cross-country mobility was better, and the guns could be manhandled into action, making them smaller targets. Some cavalymen preferred galloping-carriages for speed, but noted that rough terrain impeded them.

¹³⁹ WO 108/267 Nos 1 p 19, 23 p23, 8 p 20, 23 p22,32 p 23

¹⁴⁰ Kenny-Kelly noted that his division was attacking and machine guns were hard to deploy in consequence; WO 108/267 p 27.

¹⁴¹ Ibid Nos 43,46 p 25, Nos 47,48,49,50 p 26,pp 53-4 ; WO 108/253,p 11.

¹⁴² WO 108/267's questions are general, significantly 5 replies mention Pieter's; sers 14,15,22,30,31. This is more than for any other battle.

¹⁴³ WO 108/267 No 37 p 62.

¹⁴⁴ *Machine Guns* p 73. *IDB 1896* p 118. Chapter 2.

¹⁴⁵ WO 108/267 pp 4,10,11.

The Report also sought views on the future of machine guns. Most replies advocated 2 per unit but FW Kitchener urged:

machine guns should accompany every company....[T]o fight any body of infantry.. unsupported by machine guns ..is a crime.....I consider eight the minimum and 10 the best number for 600 infantry.¹⁴⁶

Mounted arms were more positive about machine guns than infantry. Carbine-armed cavalry naturally found them more valuable for long-range fire than rifle-armed infantry. Also MI and cavalry tended to more widely deployed in action, making their support more valuable.

Brackenbury instituted the Special Committee on Machine Guns to clarify their tactical roles and to resolve conflicting views from South Africa. The Committee had access to the South African report. The President had experience with machine guns in South Africa. All members had served there and the secretary had also fought in Tirah. The Committee was asked to answer what their tactical roles were? What arms should have them attached and how many? The Committee foresaw 10 offensive tasks, the most significant being to cover attacks. Their concentrated fire meant they were easier to control than riflemen, while their fire should be flanking, minimising hostile fire and maximising enfilade. Veterans were 'unanimously' favourable on their defensive value. The Committee noted their ability to sweep avenues of advance, to free men for counter attacks and to enfilade obstacles.¹⁴⁷ They were useful for advanced and rearguards, for outposts, reconnaissance and convoy protection. The Committee recommended that cavalry regiments should be scaled with one and MI and infantry battalions with two guns. Mobility was the prime characteristic for cavalry and MI weapons, which should be carriage-borne, with a tripod also carried.¹⁴⁸ The last feature suggests the increased importance of

¹⁴⁶ Ibid pp 5,61, Ibid p 62.

¹⁴⁷ WO 33/137 pp 7-8. Glossary; all apply today.

¹⁴⁸ They also recommended MI companies in cavalry brigades should have pom poms. Thus cavalry units needed less firepower. Later cavalry units were armed with 2 machine guns.

dismounted action. Later cavalry machine guns were pack-borne, suggesting cross-country mobility was the priority. The Committee recommended that unit machine gun officers: 'should be allowed great liberty of action,' clearly endorsing initiative. The Committee recommended that these officers should consequently be mounted.¹⁴⁹ They concluded that bad tactical training had resulted in failure to use the weapons to best effect in 1899-1902. Often they had been over-exposed to Boer fire.

The Army doubled its numbers of machine guns to two per Infantry and Cavalry unit. This scale was greater than any other European army until after Manchuria.¹⁵⁰ Weapons were tripod, not carriage-mounted, and were thus able to move more tactically. More emphasis was given to training and there were several machine gun publications.¹⁵¹ That the Army established the Committee suggests both the interest in machine guns and a determination to increase firepower.

Pom poms were used extensively in South Africa. A separate committee examined them but they were quickly withdrawn from field formations. They were a transitional weapon, useful before the deployment of QF artillery, but then markedly inferior.¹⁵²

Rifles

A report recording over 600 replies from most SAFF units analysed rifles. The questions are technical, though some replies give general insights; eg De Lisle's comment:

The greatest lesson [of] this war is the power of the modern rifle....., I think it [the Lee-Metford] much inferior to the Mauser ... As a quick loader, it cannot be compared...as a long-range weapon, it is much inferior.

Most favoured cliploading to increase rapidity of fire. Major Fry commented:

Where small parties are covering ground, ...rapid fire at long ranges makes it almost impossible ...to gauge the strength of the force opposed, and ...valuable

¹⁴⁹ WO 33/137 pp 10-11; this would speed up reconnaissance.

¹⁵⁰ WO 108/307 23/2/00.

¹⁵¹ *Musketry Report Hythe 1901* (1902), p 32, Chapter 8.

¹⁵² WO 108/265; WO 33/137; Glossary.

time is gained. How often have our estimates of the Boer forces been very much exaggerated by this.¹⁵³

Many appreciated that volume of fire was as important as accuracy. An Infantry CO observed:

I am now strongly persuaded that no ammunition fired with any sort of aim...up to ...possibly 1500 yards is “wasted”. Even if it has no more result than to make the enemy keep his head down, the expenditure is justified.¹⁵⁴

Volume of fire rather than extreme accuracy was a feature of the BEF’s musketry in 1914. This was based on South African lessons and extensive trials.

Cavalry viewed carbines as too short-ranged; more perceptive cavalrymen foresaw that:

In future... cavalry benefiting by recent experience will use their firearm more effectively than hitherto, for instance having seen how a few well posted... Boers, acting as a rearguard have delayed the advance of mounted troops pursuing, it will be... necessary to provide a more efficient weapon than a carbine.

This suggests a switch away from shock action. Four Cavalry brigadiers felt that a longer-range weapon was needed. Gordon commented:

It is essential for cavalry to carry a really good firearm, and one which, when dismounted action proves necessary, can compete fairly with the enemy’s infantry.¹⁵⁵

Haig felt that:

[t]he possession of a rapid and accurate shooting weapon has rendered cavalry more independent... The ideal cavalry is one which can fight on foot and attack on horseback.¹⁵⁶

No similar stress on improving cavalry firepower has been detected before South Africa. This suggests that cavalry tactics had changed substantially. Chapter 5 examines the far-reaching deductions that were made about rifle-armed Cavalry’s future importance.

¹⁵³ WO 108/272 Q I(b) p 24; Ibid No 329 p 72.

¹⁵⁴ WO 108/272, No 401 p 119. Also Col Carr *RCWSA Evidence II* p 394.

¹⁵⁵ WO 108/272 No 80 p 147; Ibid No 24 p 173.

¹⁵⁶ *RCWSA Evidence II* p 402.

The SMLE was the product of South Africa. Its barrel was shorter so that mounted troops could carry it easily and it was lighter by 1 lb.¹⁵⁷ A journal summarised its characteristics which were:

adapted to the greater individual activity demanded in the face of modern fire action, and to the snapshooting from behind cover at short ranges to which the [CinC] is constantly....laying stress.'¹⁵⁸

It was cliploading and thus capable of a higher rate of fire than the Lee-Metford.

Trials showed that it was slightly more accurate than the long Lee-Enfield.

Theoretically a short barrel reduces muzzle velocity resulting in less accuracy and less ability in bayonet-fighting. Practically it was as accurate as the Long Lee-Enfield, while its handiness was an advantage in close combat.¹⁵⁹ It was optimised for rapid fire, being largely wood-covered. This protected the firer against barrel-heat, while its bolt was designed for rapid fire. A 1914 veteran recalled the results:

I fired 130 rounds... If I haven't killed and wounded 80 of them, I ought to be reduced to a third-class shot... rabbit shooting ain't in it.¹⁶⁰

Training and Tactics

Generating greater firepower from small arms had to be achieved primarily by training and tactics as the technology was relatively mature. However the Army examined SLRs after 1901.¹⁶¹ Roberts criticised bad short-range shooting and poor combat marksmanship. He blamed low-quality recruits, lack of initiative and poor training for these faults:

[n]or is it to be expected that that he will become a master of his weapons, if he is not accustomed to use his own common-sense and to take an interest in his own training as a skilled fighting man.

Kitchener commented: '[o]ur men were not as quick and accurate...in shooting rapidly, but they had not been trained for this.' Here Kitchener was stressing

¹⁵⁷ WO 32/9075 'Memorandum Superintendent Enfield 22/2/05.'

¹⁵⁸ BA LXVIII (1902),p 54.

¹⁵⁹ AFPs 50315 'Maj Marker Memorandum.'

¹⁶⁰ WO 279/9 p 118; DF Allsop & MA Toomey *Small Arms* (1999),p 139; Maj Pridham *Superiority of Fire* (1945), pp 17,65, citing a 1914 veteran, possibly: 'remembered with advantages!'

¹⁶¹ WO 32/9082 'Automatic Rifles 1902-4'.

snaphooting, whose importance had been emphasised by the need to engage foes using fieldcraft. Gwynne summarised senior officers' views:

[n]o expenditure of time or money is too great when made in the direction of obtaining efficient shots. The ideal of musketry training is not high enough (sic).

Gwynne's correspondents felt that more field firing would be necessary, while a more individual fire-discipline would replace volleys.¹⁶²

MRs 1898 had emphasised that: 'volley firing is the description of collective fire generally employed, while independent is the exception,' noting that volley-firing: 'keeps the men well in hand and is *an aid to discipline* (sic).'¹⁶³ As in Tirah, veterans criticised the use of volleys. Capt Cairnes argued that they were only possible at long ranges and recommended controlled, individual fire.¹⁶⁴ Capt Campbell rebutted the idea that collective fire meant volleys. This, he noted, was first questioned after Tirah.¹⁶⁵ Grierson reported that volleys were no longer practical: 'the sooner this is recognised and the men taught to fire individually with care and intelligence the better.' Lt Col Pilcher urged more field-practices.¹⁶⁶ As Chapter 7 argues, rejecting volleys delegated initiative to soldiers.

In 1901 Hythe reduced weapons drill, the most mechanical part of its syllabus.

In contrast a:

corresponding increase has been made in ... skirmishing ..., tactical employment of fire and object lessons in fire...From the commencement of [1901] a good deal of weight has been given to skirmishing.¹⁶⁷

Hythe now emphasised the: 'quick aim and the use of cover.' Field practices were treated as small tactical schemes.¹⁶⁸ The Indian authorities recommended that:

'military training must be combined with practices at objects and at ranges likely to

¹⁶² WO 32/9082; *RCWSA Report* p 46; *Ibid* pp 46-7; *The Army on Itself* (1904), p 159; Chapter 7.

¹⁶³ *MRs 1898* p 83.

¹⁶⁴ 'The Military Critic *The Westminster Gazette*' 'Some Lessons of the Boer War' *NR* 35 (1900), p 1035.

¹⁶⁵ 'The Limitations of Infantry Fire Control and Discipline' *JUSII* XXX (1901), p 120.

¹⁶⁶ Lt Col Pilcher *Some Lessons From the Boer War* (1903), p34; 35-6.

¹⁶⁷ *Musketry Report 1901* (1902), p5.

¹⁶⁸ *Ibid* pp 21-2.

be met in the field.’ They emphasised snapshooting, initiative, enfilade fire by picked shots and imaginative training involving musketry and tactics rather than memorising pages of regulations.¹⁶⁹

MRs 1903 contained little on volleys and omitted *MRs 1898*’s mechanical fire-discipline section. Instead it stressed snapshooting and firing from cover. It continued Hythe’s integration of low-level tactics and shooting, described above. It emphasised field firing, initiative, delegation of command, concealment and significantly that: ‘*Mutual Action and Support* (sic) are of the first importance.’¹⁷⁰ This stress on covering fire and greater tactical integration suggests that increased defensive firepower had to be countered by more firepower and more sophisticated tactics.

The 1898 and 1903 trained soldiers’ musketry courses contrast starkly. In 1898 there were 6 volley-practices, in 1903 none. In 1903 more practices were fired lying which gave greater protection than when standing or kneeling. Chapter 6 examines the consequences for fieldcraft. In 1903 both rifle and machine gun practices stressed firing from cover, unlike in 1898. This suggests far greater realism and fieldcraft. Practice ranges were shorter in 1903. This is partly explained by the deletion of volleys, involving long-range fire, and the inclusion of snapshooting, a short-range skill, in *MRs 1903*. The Indian authorities introduced similar changes in musketry, though there Tirah may have been influential.¹⁷¹ Also *MRs 1903* recommended more realistic, smaller targetry than the 4’x8’ screens used previously.

Conclusions

The examination of firepower after South Africa suggests that artillery’s importance had increased, close artillery/infantry cooperation was vital and that

¹⁶⁹ L/MIL/7/2462 Musketry 1901-2. India also introduced extended formations; Ibid pp5,9.

¹⁷⁰ *MRs 1903* p47.

¹⁷¹ Tables 17&18; *MRs 1903(Provisional)*, p 91. Increased use of the prone position suggests an important change in fieldcraft; *IDB 1896* had prohibited this close to the enemy, Chapter 6; *MRs 1903* pp 112 –1 to 10; *MRs 1898* p 94; L/MIL/7/2462 ‘Musketry Circular,’ pp 3-4; Table 19.

movement had to be synchronised with fire. Consequently artillery could no longer be a matter for gunners only. This had implications for professional development, for artillery organisation and C³. British forces had suffered from technically superior Boer pieces; Britain was aware of French QF developments and felt menaced. Thus rearmament with QFs was pressing. Chapter 9 analyses how QFs were developed through purposeful user-specification. The Army began to appreciate howitzers more. South Africa had taught that Indirect Fire was valuable for engaging defiladed targets. Concealment of pieces had become more important and there was greater stress on initiative by gunners

South Africa showed that Infantry needed more firepower and more machine guns. Infantry focused on shorter-range fire and snapshooting as volleys were found to be impossible. Chapter 7 examines the implications for initiative and Chapter 5 analyses the implications of the Cavalry's rearmament with rifles. Some firepower lessons, particularly on C³, cooperation between infantry and artillery, extra firepower and marksmanship had already been seen in Tirah. It is thus possible to trace a rough connection between the lessons of the two campaigns.

Chapter 5 Mobility and Manoeuvre

Wot makes the soldier's 'eart to penk, wot makes 'im to perspire?
It isn't standin' up to charge nor lyin' down to fire,
But it's everlastin' waitin' on an everlastin' road,
For the commissariat camel an' 'is commissariat load.

Introduction

As Kipling suggests, mobility is far more than dashing cavalry charges.

Logistics, organisation and staffwork are equally important in achieving it. This chapter examines the theoretical basis of mobility, analyses British mobility in 1897 and in South Africa, the ensuing lessons and their implementation. It argues that more stress was put on mobility and thus on manoeuvre and the operational level of warfare from 1900. This had implications, examined in Chapters 7 and 9, for the development of initiative, doctrine and C³.

Mobility, Manoeuvre and the Arms

Mobility and Manoeuvre

This section probes deeper into the theory of mobility and manoeuvre, continuing Chapter 1's examination of manoeuvre and attrition. It blends theory with factors specifically relevant during the thesis' period.

The first point is that mobility, unlike fire, has no military utility of its own. Troops cannot fire when moving or their firepower is impaired. In motion they are more vulnerable to enemy observation and fire. Movement causes stores to be consumed at a faster rate, while their replenishment is complicated. Movement tires troops and animals, and, particularly if combined with food shortages, it increases the casualty rate. In consequence movement must be undertaken to gain an advantage or to diminish that of the enemy.

Mobility during this period was a more complex factor than firepower which was an instrument applied directly on battlefields of limited depth. Mobility does not

necessarily involve combat as forces move faster when not fighting.¹ Consequently mobility has a greater association with strategy and operations than it does with tactics, but it affects all three levels.² Strategic mobility was essential for an empire extending from Esquimalt to Stanley. This partly accounts for the Army's high proportion of Infantry, the most readily transportable arm, compared to Cavalry or Artillery, and its lighter artillery pieces.³ Colonial warfare demanded mobility but this was largely logistical. Churchill attributed the Mahdi's defeat to the railway. Logistics were critical to victory in most other Colonial campaigns.⁴ Consequently the speed and tempo demanded by operational level mobility in conventional wars was less important. This naturally caused cavalry, a logistically demanding arm, to be at a discount.

The effects of mobility are non-linear, both geographically and mathematically. Attrition tends to be conducted between relatively static forces and is generally positional in nature. Contrastingly mobile warfare is dynamic and, instead of set-piece, positional actions, meeting engagements are more common on more complex, deeper battlefields. Firepower generally is only capable of achieving effects proportionate to its inputs; indeed there is an upper limit at which it inflicts excessive collateral damage and overstrains the firing side's logistics. Dynamic mobility contrastingly is capable of disproportionate results. Unlike firepower where the absolute weight of attack is critical, mobility's key dimension is its relationship with the enemy's ability to react.⁵

¹ Maj Gen Altham *The Principles of War* (1914), pp 114-5.

² Maj Gen Maurice *British Strategy* (1929), pp 51-4.

³ BA LV (21/9/95), p 341; Chapter 4, Table 15. Horses suffered from long voyages, both arms were equally reliant on horses, while few extra-European wars demanded massed cavalry or artillery.

⁴ Maj Callwell *Small Wars* (1899), pp 38-9. WS Churchill *The River War I* (1899), Chapter 9 and II p 326; Maj Gen Hughes *Open Fire* (1983), pp 56-7.

⁵ Maj Gen Maurice *Maps 18-26 BROHSA* (nd), Maps 22&22a suggest mobility's complexity. These show Boers and British interspersed in depth; Brig Gen Edmonds *MOFB 1918 I* (1935), p 533 for 1916-17's damage to German mobility in March 1918; Table 10; R Beaumont *War, Chaos and History* (Westport 1994), pp xiv, 3-6, 8-10. Beaumont illustrates complexity by using dynamic situations such as fluids and meteorology. This suggests the greater complexity of mobility. DESERT STORM and COMPASS suggest mobility's disproportionate effects.

Consequently organisations and C^3 affect it considerably. This is another reason why mobility is complex. An ill-structured force with poor C^3 may physically be as fast as its enemy but will find collective, timely movement hard.⁶ Speed, a dimension of mobility, is connected closely to tempo and surprise. Chapter 7 argues that delegating initiative is necessary to achieve both effects. Mobility may not necessarily favour larger forces, which, Bloch argued, would collapse under their own logistic weight.⁷ Here mobility differs from firepower where numbers are more important.⁸

Mobility is primarily the factor associated with offence. To attack involves movement and, when moving, fire is less effective. Moreover movement involves more exposure, even when utmost use is made of fieldcraft. Covering fire protecting movement became more vital as defensive firepower increased. Tirah and South Africa both demonstrated this. Mobility allows ground to be exploited dynamically and increases the efficiency of weapons by concentrating strength against weakness.⁹ Fire may also be necessary to kick-start movement. Reitz commented: '[t]he British ... blasted a gap through which the victorious soldiery came pouring.' Current doctrine links the two factors inextricably.¹⁰ Mobile forces must have sufficient firepower not only to provide covering fire during movement but also to threaten or to inflict mortal damage on the enemy once they have reached their objective.¹¹ This has logistic

⁶ R Leonhard *The Art of Manoeuvre Warfare* (Novato 1991), p23 describes the mathematical difficulties of modelling manoeuvre. Firepower is far easier; Maurice *Strategy* pp 174-5; Chapter 9; Glossary.

⁷ I Bloch *Is War Now Impossible?* (1899), pp 37, 151, 342-5; current analysis shows that too many vehicles relative to available routes causes jams. JJ Mearsheimer *Conventional Deterrence* (Ithaca 1983), p 39.

⁸ FW Lanchester *Aircraft in War* (1916), Chapter 5. Numerical superiority is tempered by concealment, skill and weaponry but when these factors are roughly equal, it is decisive.

⁹ *ADP I Operations* (1994), p 5-3; Glossary.

¹⁰ D Reitz *Commando* (1929), pp 87-8, though secondary evidence, he was a Pieter's veteran and material in Chapters 3&4 confirms his point; *DMO* (1996), pp 4-21-22.

¹¹ This makes the point that mobility is not decisive by itself. But as it disrupts the enemy's C^3 and demoralises, the amount of casualties inflicted may be less than those required by attrition, eg the contrast between Verdun and SICHELSCHNITT. JS Corum *The Roots of Blitzkrieg* (Lawrence 1992), p 3 suggests over 700,000 casualties at Verdun more or less equally divided. German casualties in SICHELSCHNITT were 156,556, Maj Ellis *The War in France and Flanders* (1953), p 353.

implications.

Mobility in 1897

Superficially mobility is determined by speed but there are other dimensions: the ability to cross rough terrain, the capability to move in the teeth of enemy fire and finally endurance.

In 1897 tactical and often operational-level mobility was based on marching and animals, primarily horses. Horses have good cross-country ability and move faster than infantry in good going, but are prone to disease. They are harder to conceal than men, making tactical use of ground harder. In dismounted action, 25% of troopers must remain as horseholders and the led horses are vulnerable.¹² There were thus sound reasons for commanders to keep cavalry mounted, maximising mobility, surprise and tempo.

Mobility changes with ground. In very rugged terrain Infantry have the greatest mobility. Mounted troops were less impeded than wheeled artillery, but pack-borne pieces could: 'climb up the side of a sign-board and trust to the stick of the point.'¹³ Mobility is also relative to threat. Artillery was more vulnerable when moving under Direct Fire by virtue of its slower pace than mounted troops, its inability to fire when moving and its large target-size. But artillery, particularly when shooting Indirect, can switch its fire almost unconstrained by enemy action. The shells are the weapons. Furthermore, as its pieces are usually not under close-range Direct Fire when shooting so, artillery retains more freedom to move than the other combat arms. Mounted troops were large targets, though smaller than artillery, and were barely capable of firing

¹²LS Amery *THWSA* VI (1909),pp 428-30; Maj Callwell *Small Wars* (1899),pp 51,54,357-8; Lt Col Blenkinsop *Contagious Diseases Among Animals* (Dublin 1904); 'The Military Critic' *The Westminster Gazette* 'Some Lessons of the Boer War' NR 35 (1900),p 1032; FW Lanchester *Aircraft in War* (1916),pp 14-5. Col Henderson *The Science of War* (1905), p 59.

¹³ Amery *THWSA* III p 395; Glossary; R Kipling *Verse. Definitive Edition* (1977),p 403. A more conventional assessment is that mules can climb anywhere that men can without using their arms, Brig Bidwell *Gunners at War* (1979),p 84.

while moving. But shock demanded speed which also produced surprise and tempo. Sometimes a cavalry charge was cheaper in casualties and more decisive than a slower infantry advance. Infantry can move under heavy fire by using ground and their fire is less constrained by movement. Under heavy fire Infantry may be more mobile; out of contact mounted troops were, while shells are constrained only by range, the availability of ammunition and trajectory. Thus mobility depended on many factors other than crude speed.

A key component of mobility is endurance. This, based on logistics, the available transport-lift and, in the period, animalmastership, is critical for the sustained mobility that manoeuvre over distance demands. In 1899 logistics relied on animals tactically and sometimes at the operational level, and rail and water both operationally and strategically.

Here it is worth emphasising that attrition and manoeuvre impose somewhat different demands on logistics. The logistic scale of the former war is undoubtedly challenging, but manoeuvre, illustrated by the Allied breakout from Normandy, poses harder replenishment problems. Sustaining momentum demands that supplies are pushed forward against dynamic resistance over rapidly increasing distances while the defence's supply lines are shortening. Also the attacker is advancing over partly unknown terrain in which the enemy has probably demolished many installations. Furthermore there is less scope to alter the objectives of manoeuvre for logistic reasons.¹⁴ On the Somme it would have been possible to reduce the attack frontage to conserve ammunition. In the German attack on Russia in 1941, reaching Tula, a prodigious advance, meant failure.¹⁵ In an animal-reliant army, forage was vital but

¹⁴ The Boer demolition of key bridges partly caused the British halt at Bloemfontein, Maj Gen Maurice BROHWSA II (1907), pp 242-3, 258.

¹⁵ J Erickson *The Road to Stalingrad* (1975), Chapter 7. Manoeuvre which fails and which has passed its culminating point is very vulnerable both tactically and logistically as 1941-2 showed.

also bulky and inefficient, constituting a far greater logistic burden than ammunition. Also during rapid movement animals need more food but supplying it is harder, as is their veterinary care. In short manoeuvre poses greater logistic problems than positional, attritional war does. However it would be wrong to conclude that logistics are easy during attrition.¹⁶

Manoeuvre

To achieve victory mobility is not enough; movement has to be purposeful, ie it implements the commander's plan. In short mobility has become manoeuvre. Successful manoeuvre depends on a commander's concept, designed to outwit the enemy, and, for its implementation staffwork to coordinate details. Both have to be effectively transmitted, reinforcing the above arguments on mobility's relationship to C³.¹⁷ Manoeuvre maximises surprise. The same is true of firepower, but there is an important technical difference. Generally firepower inflicts most casualties within 60-90 seconds of rounds hitting.¹⁸ Afterwards targets have taken cover and attritional engagement begins. In the period of this thesis, manoeuvre extended much deeper than fire and was capable of inflicting surprise in depth. The commander's aim targeting enemy vulnerability and dynamic surprise combined into manoeuvre may overwhelm weak C³ systems which are unable to react in time. In this respect manoeuvre is superior to firepower in winning and maintaining the initiative.¹⁹ Seizing a tempo-advantage is inherent in manoeuvre. Though the immediate casualties may be greater than in more deliberate combat, overall victory is far cheaper than in prolonged

¹⁶ IM Brown *British Logistics on the Western Front* (Westport 1998) contrasted to M van Creveld *Supplying War* (1977), Chapter 5; Glossary. Col Nicholson *Behind the Lines* (1939), pp 213-7 for logistics' affect on mobility in October 1918.

¹⁷ Chapter 9; Brig Bidwell *Modern Warfare* (1973), pp 91-2; defective C3 decided several manoeuvre battles.

¹⁸ JG Crowther & R Whiddington *Science at War* (1947), p 118.

¹⁹ ADP1p5-3. The contrast between Anzio, where manoeuvre was just the landing and Operation COMPASS where it was sustained in depth is suggestive. The later overwhelmed Italian C3.

attrition. Contemporaries argued similarly for shock.²⁰

Mobility Before 1899

Cavalry

The Stanhope Memorandum, which saw continental campaigning as the Army's last priority, combined with a low threat to Britain, ultimately damaged the Cavalry. The mobility that colonial warfare demanded was logistical and cross-country rather than the speed and tempo of major warfare. Massed cavalry were unsuited to many colonial wars. They were hard to move strategically, while terrain often precluded shock action as in Tirah. Between 1815 and 1899 the British Army only deployed a cavalry division twice. Its performance in the Crimea was varied and Raglan proved reluctant to use it boldly. Wolseley obtained better results in 1882, but the enemy were feeble and the cavalry pursuit was over a short distance.²¹ Hence, with adequate mobility, greater firepower and lower logistical demands, MI was often preferred to cavalry in colonial warfare. Many British-based and for that matter British cavalry units in India vegetated before 1899.

Cavalry was the key manoeuvre arm in major warfare but British Cavalry was weak compared to that of the major continental powers and distrusted by many generals.²² Its officers were recruited from generally low-calibre candidates, described by a contemporary as: 'dunces.'²³ Dr Badsey identifies a cavalry revival in the 1890s, though his 1886 start-date is apparently based on a typographical error.²⁴ More open-order shock-tactics were instituted, while the Squadron System was introduced in

²⁰ DMO (1989), p 43. Lt Col Maude *Cavalry: its past and future* (1903), pp x-xi argued that Paardeberg's siege probably cost more disease-casualties than an attack would have done..

²¹ Anglesey *A History of British Cavalry* II and III (1975& 1982), respectively pp 49-50, 75, 82-4 and pp 272, 303-5, cavalry divisions were used in India; WS Churchill *My Early Life* (1930), pp 71-3 157-8.

²² Table 40; Lt Col Gough 'The Strategical Employment of Cavalry' *JRUSI* XLIX (1905), p 1131. It is tempting to trace this back to Wellington's irascible comments, I Fletcher *Gallop at Everything* (Staplehurst 1999), pp xv-xvii.

²³ Lord Thring 'Place the War Office in Commission' *19C XLVIII* (1900), p 700.

²⁴ SD Badsey *Fire and the Sword* (Cambridge 1981), p 107 fn 4.

1892. Wood emphasised cavalry training and shooting when commanding at Aldershot. There were cavalry manoeuvres in 1890, 1894 and 1895, with cavalry concentrations in 1897 and before the 1898 Manoeuvres. But this training was flawed. The 1897 concentration of 38 days included 32 parades, one divisional, 14 brigade and 3 regimental drills, 1 brigade march-past, 3 days of inspections, one horse and 5 church-parades. It incorporated only one outpost practice and 2 reconnaissance days.²⁵ This was insufficient for effective training in detached duties. Over-accentuating shock and drill discouraged initiative. In 1898 during both the preliminary cavalry concentration and in the later all arms manoeuvres little dismounted training occurred, suggesting the tactical predominance of shock.²⁶ Protection and reconnaissance were poorly performed on the 1898 Manoeuvres.²⁷ Afterwards Wolseley criticised the state of training of the cavalry brigades: their brigadiers lacked enterprise, while superior commanders gave them too little scope. The former suggests that cavalrymen lacked confidence in their own arm. Wolseley and Roberts criticised cavalry reconnaissance in 1898 and 1899. These faults and the logistic weaknesses, analysed later, suggest that the Army would find sustained manoeuvre hard.²⁸

Over-control by senior commanders suggests institutional distrust of the cavalry and failure to understand its operational level capabilities.²⁹ The usual British proportion of cavalry was one brigade per army-corps, while the Cavalry Division HQ was not seen as usually deploying. This meant that cavalry brigades would be under corps command or further decentralised rather than being concentrated for significant

²⁵ *BHG* III (1897), p 5; Maj Morrison 'Cavalry in the Manoeuvres of 1898' *JRUSI* XLIII (1899), pp 632-3.

²⁶ WO 297/4 pp 18, 21, 47, 50, 29-30 implies that there was no formation reconnaissance and limited protective training between 1/7/-27/8/98, while RHA were only present between 16-27/8/98. MI were used as artillery escorts, suggesting their firepower was used ineffectively. Morrison 'Manoeuvres,' pp 637-9; WO 297/4 p vii.

²⁷ FM Wood *From Midshipman to Field Marshal* II (1906), pp 214-5. Though secondary evidence, this simply records facts; WO 279/3; WO 279/9 p 32.

²⁸ Buller also was critical, WO 297/4, Appendix II pp 25-6; *Times* 28/8/99.

²⁹ 'Military Notes' *JRUSI* XLII (1898) pp 1208-1213.

missions under the CinC.³⁰ *CDB 1898*'s section on the Cavalry Division saw its tasks as tactical, largely involving action on the battlefield rather than detached on key missions.³¹ Both suggest that bold manoeuvre was not anticipated.

Hythe judged that cavalry undervalued musketry in 1899. They still carried carbines and there is no evidence of sustained cavalry pressure for rearmament with rifles before 1899. Even in 1902 after South Africa's firepower lessons, Army HQ India criticised British cavalry's shooting. *CDB 1898* did not examine marksmanship and had only limited coverage of horse artillery and machine guns.³² Experts assessed that insufficient cavalry/RHA training had hurt interarm cooperation. This suggests that the Cavalry had misappreciated the growth of firepower and underestimated the need for covering fire. This impaired the arm's manoeuvrability.³³

CDB 1898 overemphasized massed shock action, thereby devaluing detached duties. It ordained that:

[d]iscipline and perfect order are the most important characteristics, leaders must consequently seek in training of their troops to develop these qualities to the utmost.³⁴

It also stressed that:

[t]he charge is the culminating point of cavalry instruction. Rapidity and vehemence at the point of attack must be united with perfect order and cohesion.³⁵

Though it did not formally devalue reconnaissance and protection, these followed its

³⁰ *WEs 1898* p 128; Table 29; Glossary; *CDB 1898* does not mention Independent Cavalry. It would be hard for GHQ to command 2 brigades directly without an intermediate divisional HQ.

³¹ *CDB 1898* pp 357-363. Though the Cavalry Division was seen as having: 'a more or less independent rôle' *Ibid* p 357 but with the possible exception of its instructions on pursuit and retreat, *CDB* did not emphasise this, contrastingly *CT 1904* stressed Independent Cavalry. Glossary.

³² *Musketry Report 1899* (1900), p 9; L/MIL/7/2462 'AHQ Circular Musketry 1901-2' p 2. That firepower was devalued is suggested by the fact that troopers only carried 30 rounds each, *WEs 1898* p 6. An MI private had 100. A sustained campaign for rifles would have left traces in the military journals; *CDB 1898* pp 378-81. It merely drew officers' attention to *FAD*.

³³ Col Paget 'The Tactical Employment of Horse Artillery with Cavalry' *JRA XXXV* (1908-9), p 69; *CDB 1898* p 378.

³⁴ *CDB 1898* p 199, the drill standards on p 200 stressed control.

³⁵ *Ibid* p 237. The section which the quotation starts is entitled: 'Drill of the Attack.'

lengthy Part III on drill, the basis of shock, implying their lesser importance. *CDB 1898* saw reconnaissance as important in the context of triggering cavalry against cavalry action, but did not stress its importance for extended all-arms manoeuvre. Baden-Powell considered that reconnaissance was underemphasised, while drill and shock were overvalued before 1899.³⁶ These defects impaired the Army's ability to manoeuvre.

Many units had poorly implemented the Squadron System, particularly its emphasis on delegated training. Centralisation favoured close-order shock, damaging initiative and the performance of detached duties. Decentralised cavalry combat required speedy decision-making, initiative and judgement but conditions before 1899 did not foster these qualities.³⁷ The older cavalryman:

who for years had never had a voice in the feeding or management of his horses, whose men had been paid by a regimental Paymaster, drilled by an Adjutant or [RSM], and who had not the power to take a horse of his own troop out of the stables without permission from his [CO] was not likely to embrace with zeal a newly found freedom which he was not trained to use.³⁸

The quotation links horsemastership and initiative. That horsemastership was weak suggests the Cavalry's vegetation. Officers had little involvement with it and *CDB 1898* had no instructions on it. This suggests that cavalry was focussed on tactical shock as operational manoeuvre demands meticulous animal-care over long distances.³⁹

Cavalry saw less operational service than Infantry; officer entry-standards were lower than those of other arms and cavalry officers were seen as less professional. In turn cavalrymen felt discriminated against.⁴⁰ Rimington summarised the state of the

³⁶ Ibid p 283; *Aids to Scouting for NCOs and Men* (Aldershot nd), pp ix, 11; Glossary.

³⁷ *RCWSA Evidence I* Q 10441. The 4th Hussars were overcentralised in 1913, HOWPs 8/4/1 letter 16/12/13; *CDB 1898* pp 301-2 gives instructions which demand initiative but does not emphasise inculcating it.

³⁸ Maj Gen Smith *A History of the [RAVC] 1796-1919* (1927), p 172. Though secondary evidence, failures in South Africa and Rimington's comments, cited later, bear this out.

³⁹ *RCWSA Evidence II* p 662; Col de Lisle *The Training of the Remount* (Bombay 1909), pp 4-5.

⁴⁰ *EDR CLXXV* (1897), p 530.

pre-1899 Cavalry in Britain:

A regiment was judged by the number of officers who hunted and raced and went into society, as good or bad, or rather smart or the reverse. The fact was that in those days, as long as your horses were fat and you could march past and were fairly clean, any question of fighting efficiency never occurred.

Detached duties had been neglected since Waterloo, while shock had been overstressed as it was suited to: 'weaker intelligences.' This provides evidence that contemporaries linked detached duties and initiative.⁴¹

MI, Marching and Logistics

MI, which contemporaries saw as a uniquely British arm, were improvised from picked infantrymen, who had, in theory, prior training. They used horses for movement but did not fight mounted. Their instruction was short, continuation-training was limited and thus expertise was lost, while their riding, let alone horsemastership, were initially poor in 1899. Raising MI on mobilization meant that the resulting units lacked cohesion while their parent battalions lost their best men at the start of campaigning. Tactically MI was suited to colonial warfare; their extra firepower and dismounted skills outweighed inferior riding. That many colonial wars were small-scale, meant that weak unit-cohesion was less damaging. But MI were also intended to fight in conventional warfare to bolster carbine-armed cavalry's firepower. British commentators felt that this role and the fact that they were regulars constituted their distinctive feature. But their very existence suggests that there were defects within the Cavalry.⁴²

Infantry, seen as very much the master arm in 1899, depended on marching for their tactical and sometimes their operational mobility. They had marched poorly on

⁴¹ Thring 'Place the War Office in Commission' 19C XLVIII (1900),p 700; WO 32/6781; *Akers-Douglas Co Report* p1; WO 279/9 pp 33,43, WO 32/6781 'Dickson Co Report' p 2. *RCWSA Evidence II* Qs 12729-30.

⁴² Col Grierson *Scarlet into Khaki* (reprinted 1988),p 42; Glossary; *RCWSA Evidence II* Q13941; LS Amery *THWSA III* (1905),p 391; *The Times* 11/1/01 'Lessons of the War V-MI.'

major manoeuvres in Britain before 1899 and there was concern that this would recur in South Africa, given the influx of reservists. The ASC provided a coherent logistic structure but it, the AVD and the remount organisation were understrength and unready for major warfare.⁴³ The AVD was not attracting good-quality entrants. Furthermore veterinary hospitals had been deleted from *WEs 1898*. These structural defects suggest that the Cavalry had either little influence or was incompetent. These logistic weaknesses further imply that the Army did not anticipate sustained, large-scale manoeuvre.⁴⁴

Manoeuvre Doctrine before 1899 and the American Civil War

The Army's manuals before 1899 had no stress on mobility and manoeuvre set at the operational level. There had of course been campaigns in which British forces had manoeuvred over distances; one can see the Blenheim or Vittoria campaigns being mounted at the operational level and being based on a commander's concept involving creativity, risk taking and surprise. Roberts had marched from Kabul to Kandahar and Wolseley had initiated a bold pursuit after Tel el Kebir but neither had left any trace in either contemporary manuals or manoeuvres. Nor significantly were there any instructions on the use of Independent Cavalry. This concept, though well established in continental doctrine, was not apparently one Britain intended to adopt. This omission would have inhibited any British attempt to resort to manoeuvre.

Dr Badsey has examined the American Civil War's influence on the fire versus shock debate. However, it had a strong second influence. Henderson's *Stonewall Jackson* was the most significant book by a British officer around 1900. It was written to instruct on command, morale and surprise, ignored by Hamley, and, one may add, factors central to manoeuvre warfare. Henderson in his preface emphasised the need to

⁴³ Col Furse *The Art of Marching* (1901), p 115; *QRs 1899* pp 186-7; *RCWSA Evidence I* pp 138, 142-3, *RPrs* (1903), pp 1-2. *RCWSA Evidence I* Col Duck, head AVC p 133; 'Duck Report 11/5//99,' *RCWSA Appendices* (1903), p 100; Smith *RAVC* pp 203, 16, 38.

study strategy and its ‘principles.’ This focus suggests doctrine as Chapter 9 argues, while Jackson’s highly mobile operations also implied the need for doctrine which would steer subordinates amidst complexity.⁴⁵ The book’s most significant part examined the Valley Campaign of 1863. In this Jackson combined speed, surprise and risk-taking to attack enemy weaknesses. Jackson’s operational level manoeuvre defeated superior numbers and dislocated Federal strategy. For a small army realisation that superior mobility could defeat greater numbers was important.⁴⁶ The book impressed Wolseley, who introduced its second edition:

[the 2 volumes] have taught me much; they have made me think still more; and I hope that they may do the same for many others in the British Army.⁴⁷

Roberts had presented copies of *Stonewall Jackson* to Rawlinson and Hamilton for their voyage to South Africa. Later Roberts claimed:

I had given a considerable amount of thought to the probability of [war] in South Africa... While still thinking over this problem, I read *Stonewall Jackson*, and was much struck with the extraordinary effect which strategy... had upon the campaign in Virginia, and also with the result of Jackson’s swift and unexpected movements.⁴⁸

Henderson served as Roberts’ senior intelligence officer during the Paardeberg operation which similarly combined deception, surprise and rapid manoeuvre to defeat Cronje. *Stonewall Jackson* impressed H Gough, Ismay, Montgomery-Massingberd and Monash amongst others. The Valley Campaign was a frequent examination subject. It features in a near-contemporary manual and there are many references to both it and Jackson’s phrase: ‘mystify and mislead’ in contemporary works. Rimington modelled his brigade’s training on Jackson’s methods. Henderson’s influence remained

⁴⁴ If LADs were deleted from tank units’ establishment, it would suggest defects in the RAC.

⁴⁵ Badsey *Fire* pp 1,18,20-26; Lt Col Henderson *Stonewall Jackson and the American Civil War* (1898),pp ix-xi; J Luvaas *The Education of an Army* (1965), pp 225-6; *DMO* p 49.

⁴⁶ J Selby *Stonewall Jackson as Military Commander* (1968), p 95; *ADP 2 Command* (1995),p 2-23; B Holden Reid *War Studies at the Staff College* (Camberley 1992), pp 8-9.

⁴⁷ Col Henderson *Stonewall Jackson* (1899),p vii. Introducing the second edition suggests spontaneity.

⁴⁸ RPs 7101-23-110-1 Roberts/Henderson 27/9/99; Roberts ‘Memoir’ in Henderson *Science*, p xxiv.

substantial down to 1914 through his works and his effect on Camberley graduates.⁴⁹

Mobility and Manoeuvre in South Africa

South Africa conformed to Rommel's comment on North Africa: 'the tactician's paradise, the logistician's purgatory.' The Boers, exceptionally by European standards, were nearly all mounted, consequently they:

had, anywhere ... away from the lines of rail, far greater mobility in every respect than their opponents...In their independence of all stores, in the mobility of their least mobile troops, ... they surpass any force known to history.

The Boers began the war with the advantages of surprise, numbers and mobility. They also had a time-window before British reinforcements arrived to exploit these advantages to the full. Contemporary commentators criticised their failure to use this period decisively.⁵⁰

British Cavalry had one initial success and created the opportunity for another. At Elandslaagte they outflanked and then charged the withdrawing Boers. At Talana Colonel Moller's force got behind the Boers where it was ideally placed to kill their horses, to attack their rear in combination with the infantry or charge their withdrawal. But Moller dithered and was captured.⁵¹

Poor British mobility in South Africa caused most early attempts at outflanking

⁴⁹IFW Beckett *Johnnie Gough VC* (1989),p 131; Gen Ismay *Memoirs* (1960),p 16; FM Montgomery-Massingberd *The Autobiography of a Gunner* (Woolwich 1946),p 5. *Stonewall Jackson* inspired him to try for Camberley; G Serle *John Monash* (Carlton 1983),p 191; JH Anderson *Notes on the Life of Stonewall Jackson* (1904),p 5; Maj Gen Haig *Cavalry Studies* (1907),p 319; *BORs* (1908) II p 86; Lt Col Edwards *Notes on the Training, Equipment, and Organisation of Cavalry for War* (1910),p 79; *AFM I* (1985),pp 301-11. FM Robertson *From Private to Field Marshal* (1921),pp 82-3. Though written later, perspective would have been needed for such a judgement, while the views of an ex-student of Henderson and a later Commandant of Camberley are valuable; WO 279/516 '3 Cav Bde Mans 3-15/8/03' p 1; ROBPs 1/2/10 'Notes on Strategy by Col Henderson. Compiled for ... students at the Staff College' (6th edition 1912). It almost certainly would have been distributed to Quetta; that it had reached 6 editions suggests wide distribution; WO 27/405 'Strategy.'

⁵⁰ Maj Norris *The South African War* (1900),pp 46-7; Capt Mahan USN *The Story of the War in South Africa* (1900), pp 8-9,58.

⁵¹MURPs 'Talana folder'; LS Amery *THWSA II* (1902),pp 170-3,230; Lt Col Gore *The Green Horse in Ladysmith* (1901),pp 6-9,10-11. Moller's regiment was nicknamed Kruger's Own afterwards!

to end in frontal attacks eg Buller's outflanking move at Colenso and Methuen's initial actions at Belmont and Graspan. Both commanders were short of mounted troops, while Buller's were hastily organised. Buller largely blamed his artillery losses at Colenso on his inability to resupply his troops with water. This logistic failure was essentially a mobility defect.⁵² Buller understood that immobility meant infantry assaulting entrenchments frontally: 'the very thing that ought not to be done,' but he did not make the required enhancements to mobility.⁵³ Even when his mounted troops increased, Buller did not organize them into a division. This meant that they were thus less able to execute operational level tasks. This suggests that Buller distrusted mounted forces. Buller had criticised cavalry reconnaissance in 1898. Cavalrymen later criticised his timid handling of their arm in Natal. That Buller's mounted troops were organized into separate brigades increased the span of command and complicated staffwork for his HQ, which, as Table 29 suggests, was already under considerable pressure because of its improvised nature.⁵⁴ Furthermore it was coordinating operations on two other axes, dealing with strategic issues and tactically commanding in Natal.

Buller's approach contrasted with Roberts' assessment that: 'the only means of bringing this war to a speedy conclusion... is for our force to be more mobile than the Boers.'⁵⁵ Roberts raised more mounted troops and organised them and his cavalry into a division capable of independent action. But this over-large, uncohesive formation complicated C³.⁵⁶ Roberts probably erred by over-expanding his MI and colonial

⁵² *RCWSA Evidence II* Qs 15281-4; Dundonald went to South Africa privately; he was hastily sent to Natal as a brigadier, *Army Life* pp 93,98-100, also Haig *RCWSA Evidence II* p 402.

⁵³ RPs 7101-23-221-1 extract telegrams Buller/WO 11/11/99& 16/12/99.

⁵⁴ WS Churchill *London to Ladysmith* (1900),p 251. Buller initially had 2 regular cavalry, 3 irregular units and 4 sub-units, only one regular, *SAD II* (1901),p 100; Glossary.

⁵⁵ A Wessels *Lord Roberts and the War in South Africa* (Stroud 2000),p 53.

⁵⁶ *SAD I* (1901),p 2; Maj Gen Maurice *BROHWSA I* (1906), p 485. It consisted of 3 cavalry brigades, 8 regular MI units, many of whom were novice riders, 7 colonial MI units and 7 RHA batteries. Whether all the MI were under French's direct command is unclear, but at Poplar Grove he commanded 3 cavalry and 2 MI brigades, *SAD I* p 19; Chapter 9.

forces rather than horsing his Cavalry adequately.⁵⁷ This possibly suggests that Roberts distrusted the Cavalry. Roberts also enhanced mobility by reorganising his transport. It has been claimed that this was due to his ignorance of the British transport system, but this is superficial. Roberts had served as CinC Ireland between 1893 and 1899 and was therefore aware of the British logistic system. Also he had specialist ASC advice. He felt the Regimental System required more resources than were available in early 1900. Indeed Roberts was forced to reduce his ambulances drastically due to vehicle shortages in February 1900.⁵⁸ But Roberts' new centralised system was unsustainable. Transport was reorganised several times afterwards, each time reverting towards the original system.⁵⁹ Roberts, however, was able to abandon the railway and thereby surprise Cronje. Here logistic changes had devastating operational level results.

In Natal transport remained on the old system, and, though distances were far less than in the Cape and Orange Free State, Buller's force was sluggish:

[t]he vast amount of baggage this army takes with it ... hampers its movements and utterly precludes all possibility of surprising the enemy... [R]oads are crowded, drifts are blocked, marching troops are delayed, and all rapidity of movement is out of the question. Meanwhile the enemy completes the fortification of his positions and the cost of capturing them rises.⁶⁰

Churchill makes an important point that mobility is only valuable in that it translates into some military advantage. Buller and Warren were reluctant to use their cavalry boldly during the Spion Kop operation. Cavalrymen were certain that Buller: 'will not use his cavalry,' castigating his failure to pursue after Pieter's.⁶¹

⁵⁷ This deprived the Cavalry of remounts, Haig *RCWSA Evidence* II Q 19375; Dr Badsey emphasises the point, *Fire* p 139.

⁵⁸ *SAD* I (1901), p 5; *RRCCTWSA* (1901), p 21.

⁵⁹ Maurice *BROHWSA* I pp 348-9; RPs 7101-23-110-1 Roberts/Lansdowne 7/1/00, *SAD* I p 5, there were shortages of both vehicles and animals. Roberts had senior ASC officers on his staff. LS Amery *THWSA* VI (1909), pp 364-410 contains a long monograph on transport.

⁶⁰ Churchill *Ladysmith* p 253.

⁶¹ *Ibid* pp 282-3, 292; Dundonald *Army* pp 136, 127-8; Maj Gen White-Spunner *Horse Guards* (2006), p 421 citing HCM Box 7 AB 2351; Churchill *Ladysmith* pp 469-70. *SAD* II (1901), p 40 Roberts hinted that pursuit was possible after Pieter's.

Contrastingly Roberts employed his cavalry on what can be seen as an operational level mission to relieve Kimberley. This was based on logistic changes, described above, concentration of mounted troops under a proven leader, French, and intelligence, deception and security measures orchestrated by Henderson.⁶² The chargers were unfit, their rations scanty and water scarce, a lethal combination, but despite these drawbacks, French relieved Kimberley.⁶³ The key action was at Klip Drift, where, after reconnaissance, his division charged, covered by heavy shelling. The charge was not directed at a Boer force, instead French steered it at a gap in their position. Speed, extension, there was some 5 yards between files, and dust, kicked up by both the shells and the horses carried them through a position which would have probably stopped slower-moving infantry.⁶⁴ Commentators, including Amery and Childers, neither supporters of traditional shock, were impressed:

The part played by the cavalry [at Klip Drift] ... is one which will grow in importance in the wars of the future, and in tracing the development of this new function of the mounted arm the military historian will take his starting point in the great charge that relieved Kimberley.⁶⁵

Their praise suggests that advocacy of mobility was not just the preserve of reactionary cavalymen. After the relief of Kimberley and a day wasted pursuing the Boer artillery, French was switched against Cronje. Roberts' selection of a geographic location as French's objective was probably incorrect; Cronje's force was the proper one. This suggests command and staff failures. Despite high horse mortality, French intercepted Cronje, who, instead of evading, entrenched and was eventually captured.⁶⁶ The effort, however, largely destroyed the cavalry's chargers and later

⁶² Amery *THWSA* III, pp 339-40,347-55,59.

⁶³ Capt Boyle 'The Cavalry Rush to Kimberley and in Pursuit of Cronje' *19C XLVII* (1900),p 906.

⁶⁴ Amery *THWSA* III, pp 393-5. One officer was killed, 20 all ranks wounded, *SAD* I p 10; Leonhard *Maneuver* p 64 suggests defeating the enemy without fighting is the acme of manoeuvre.

⁶⁵ Amery *THWSA* III p 395; E Childers *War and the Arme Blanche* (1910), pp 96-106.

⁶⁶ Rhodes pressured for an early relief; *THWSA* III, p 368. But Cronje's failure was much greater and Roberts' choice of objective could hardly have been based on Cronje's adopted course. Later there were other criticisms of Roberts for adopting geographic rather than military objectives. Henderson went sick during Paardeberg; his absence has been blamed for Roberts' preference.

manoeuvres consequently failed. Weak horses, Roberts' staff's failure to synchronise formations, and a sluggish performance by French let the Boers escape at Poplar Grove.⁶⁷

Despite command and staff failures by senior commanders and their HQs, many cavalry commanders and units performed poorly in South Africa. Roberts stollenbosched 6 cavalry brigadiers and 11 of 17 cavalry COs. This was a far higher proportion than in the Infantry, suggesting serious cavalry defects.⁶⁸

As combat continued, both sides' mobility increased. The Boers ditched their wagons, partly the cause of Cronje's encirclement, while the British raised more mounted troops, lightened horses' loads, discarded cold steel and, as the Boers no longer had artillery, withdrew pieces from many columns. This removed the risk of the Boers capturing British artillery, which would have been fatal to their blockhouses, and increased British mobility. Surplus gunners converted to high-class MI. Many future senior commanders led columns in these highly mobile operations. Gough admitted to learning more about reconnaissance from some Natal farmers than from his previous 10 years cavalry service. This shows how poor prewar training had been.⁶⁹

Despite these improvements, British mobility remained below that of the Boers'. The British relied on resupply and were constrained by wagons. Many were either poor horse-masters or untrained recruits. Another problem was that Kitchener's centralised control system proved, with the existing communications, unable to coordinate dispersed, mobile operations.⁷⁰

⁶⁷ Robertson *Private* pp 114-5. Robertson was at Roberts' HQ, though he wrote years later.

⁶⁸ WO 32/7904; RPs 7101-23-122-2 Roberts/Curzon 19/9/01. He sacked 3 Infantry COs.

⁶⁹ *Soldiering On* (1954), pp 66-7, though written years later, Gough's candour suggests veracity; Byng, Haig, and Allenby all commanded columns in South Africa and later armies in 1914-18. *SAD II* (1901), p 57 praised Gough's scouting so he learnt fast.

⁷⁰ E Childers *THWSA V* (1907), pp 89-90; Gen Hamilton *The Commander* (1957), pp 99-104.

A perennial problem was how representative of modern warfare were South African conditions? The Boers had no cavalry but later adopted charging tactics successfully. These were not based on physical shock but on mounted fire or galloping to fire positions, then dismounting and shooting from cover. The British also adopted galloping tactics, which were far from exclusive to cavalry. They had to pin and defeat the Boers, who could not afford to become committed to decisive action if they were to survive.⁷¹ Galloping horses are a hard target and, with declining numbers, the Boers could not generate enough fire to stop them. A veteran recalled how 8 troopers had rushed a small group: 'at this stage in the war the Boers would very seldom hold onto a position if they saw us galloping straight for them.'⁷² Probably the latter part of the war saw more shock tactics, albeit of a novel nature, than the first phase. This further complicated the fire versus shock debate.

Changes in Mounted Tactical Roles

The tactical demarcation between Cavalry and MI changed in South Africa. Hitherto reconnaissance and shock were strictly Cavalry tasks, while dismounted action was practically reserved for MI. Cavalry saw the tactical need for rearming with rifles and fighting dismounted, while some MI officers argued that their men could do more than simply move mounted. MI columns, many of which had no cavalry, had to scout and sometimes charge. But these innovations did not affect MI tactics or roles after 1902. Contrastingly South Africa permanently altered cavalry tactics and weaponry, with more emphasis on dismounted action, reconnaissance and fire.⁷³

Increased firepower and dispersion in South Africa suggested that reconnaissance, offensive manoeuvre and dismounted action were now more necessary than traditional shock-action. Offensive manoeuvre involved rapid

⁷¹ Altham *Principles* pp 78-9; Capt Saunderson *Notes on [MI]* (Aldershot 1904), pp 28-32.

⁷² Lt Holland 'South African Reminiscences- contd' *BHG VI* (1908), p 187.

⁷³ *MIT 1904* p 66 stressed that MI only fought dismounted.

movement to pre-empt the enemy and seize tactically important points which cavalry, now rifle-armed, could hold until relieved. This combined offensive manoeuvre and firepower to defeat static defensive firepower. The defenders faced either encirclement or being forced to break-out. For a small army, backed by a strong economy, superior mobility rather than increasing numbers had attractions. But some opponents of traditional shock, including Roberts, saw a residual role for it. Here it may be noted that the First World War saw considerable shock action including Mounted Rifles, troops without either the cavalry's shock-ethos or steel weapons, successfully charging semi-permanent defences on horseback. The Australians later demanded and were issued swords in 1918.⁷⁴

Shock tactics altered in South Africa. In theory their greatest effectiveness is produced by the collision of a heavy, cohesive unit moving as fast as possible. Consequently cavalry needed to be literally boot-to-boot. In South Africa charges tended to be at wider intervals. One notes the 5 yard interval at Klip Drift and the extended order at Elandsplaagte. Partly the reason for this was that the British were not charging enemies in close-order, indeed at Klip Drift they were charging space not troops. Greater firepower also encouraged open-order charges. Consequently cavalrymen started to recommend smaller men and smaller horses for their arm. Heavy men on heavy horses were ideal for traditional close-order shock, but such horses were poor in protracted manoeuvre as they were less robust and needed more rations.⁷⁵

Whether poor reconnaissance in South Africa was due to smokeless ammunition and long-range weapons, combined with the open terrain or whether it was due to cavalry failures combined with inadequate training is not a question which can be

⁷⁴ *CT 1904* p vi; *Capt Falls Military Operations Egypt and Palestine II* (1930), pp 638,644-5.

⁷⁵ *Gore Green Horse* p 31; *W Gilbey Small Horses in Warfare* (1900),p 1.

settled definitively here. Ground-based reconnaissance needs to be more extensive in manoeuvre and is particularly important in view of the need to target weakness. The general view was that British reconnaissance had been poor; many blamed the Cavalry. Gwynne had questioned 10 commanders on cavalry scouting, which he saw as their most important task: 9 felt it had been bad. Lt Col Morrison, a South African veteran and cavalryman, criticised cavalry reconnaissance. In contrast Grierson, serving at Roberts' HQ felt that cavalry had provided sufficient information.⁷⁶ Despite this one notes reconnaissance failures, perhaps most critically during the first De Wet Hunt which had failed largely due to: 'extraordinarily bad scouting and field intelligence.'⁷⁷

The Lessons

Mobility and Manoeuvre's Importance

Cavalry tactics were changing with more emphasis on reconnaissance and manoeuvre rather than on tactical shock. But the latter change went deeper than just tactics or the Cavalry. Manoeuvre, surprise and tempo had Army-wide implications. Manoeuvre demanded initiative, 'internal' discipline, doctrine and staffwork. It also demanded that infantry marched well, that logistics were strengthened and that all parts of the Army were ready for sustained movement.

The South African War, Britain's ensuing diplomatic isolation and the revelation that the Army had performed poorly increased the perceived threat of major warfare. Given the wide array of contingencies analysed briefly in Chapter 1 and the advantages of manoeuvre over attrition when fighting superior numbers, unsurprisingly the British were to emphasise the former. In January 1900 the RUSI reprinted Gen Chesney's lecture 'English Genius and Army Organisation... by special

⁷⁶ *The Army on Itself* (1904) p 60; WO 108/184 p 87; 'Second Prize Essay' *JRUSI* XLV (1901), pp 816,801.

⁷⁷ B Williams *THWSA* IV (1906), p 432.

request.' Why this was done is not recorded but it was almost certainly due to Chesney's emphasis on mobility. Chesney argued that the antidote to Continental numbers was a small, high-quality mobile army, capable of outmanoeuvring masses.⁷⁸ Better-quality recruits would be more likely to display the initiative necessary in such combat. Many later commentators acknowledged Chesney directly. Others, like Conan-Doyle or Cairnes, were probably influenced indirectly. The former recommended that 30,000 MI form the backbone of the Army, precisely the same figure as Chesney suggested for his mobile force.⁷⁹

The RCWSA gave mobility exceptional attention. Its Report highlighted 5 topics. Three involved mobility: horsemanship, horsemanship and marching. The others were shooting and entrenchment. It had a separate section on mounted forces. There was no artillery section, even though QF artillery was emerging. This suggests the priority attached to mobility. The Report noted that the SAFF initially deployed with more mounted troops than establishments allowed, but even they had proved insufficient. It argued that more mobile troops were needed to outmanoeuvre greater defensive firepower and larger enemy forces.⁸⁰ The RCWSA saw increased mobility as necessary for European warfare. Roberts emphasised: '[i]n all future wars we shall require a much larger number of mounted men than we have ever had hitherto.' He had heavily criticised cavalry performance in South Africa, yet recommended strengthening the arm. Haig unsurprisingly agreed:

Cavalry will have a larger sphere of action in future wars; in fact, as now armed, [with magazine rifles] it is a new element in tactics.... Besides being used before, during, and after a battle...we must expect to see it employed strategically on a much larger scale than formerly, when it was without an effective firearm.

Haig's 'strategic' would now equate to the current operational level, while his point

⁷⁸ *JRUSI* XLIV (1900), pp 61-3, given in 1874. Research at the RUSI has failed to establish why it was reprinted.

⁷⁹ *The Great Boer War* (1900), p 530; Chesney 'Genius' p 62 suggested 30,000 mounted men.

⁸⁰ *RCWSA Report* pp 49-52, 32-3, 49; *WEs* 1898 p 128.

on rifles enhancing mobility is examined later. Baden-Powell, the new IGC, considered that:

[c]avalry are more essential in modern war than ... ever before, both for extended strategic moves, for wide reconnaissance, for distant raids, and for tactical flanking operations.

Gatacre, an infantryman, concluded:

[c]avalry will more than ever be necessary for the fight of the future... [f]or turning movements, prolonging attacks and positions rapidly, for rear guards and pursuits.'

Gen Wood emphasised:

Four legs will always beat two... Large conscripted armies cannot afford many [MI], but with our small voluntary Army it is the natural solution of fighting greater numbers by enabling one man to fight three, as has been shown ...in South Africa.⁸¹

Outside the RCWSA others similarly extolled the importance of mobility and hence the cavalry's greater value. In 1904-5 the Military Secretary judged that

Cavalry are, I think, in these days the most important branch of the Service, and I cannot conceive any more retrograde step than a reversion to... admitting ...Officers of inferior mental calibre.

He saw the arm priority as cavalry, artillery, engineers and finally infantry.⁸² Judging by previous criteria, the previous order had been engineers, gunners, infantry and then cavalry. Col Graves felt that if the war's first lesson was invisibility, mobility was second, citing Chesney. He blamed British immobility for many early frontal attacks.⁸³ French saw future cavalry roles as: outflanking, reconnaissance and protection, threatening enemy lines of retreat, then pursuit, finally screening and deception. Shock was only important in that it enabled the defeat the enemy cavalry, thus depriving them of their reconnaissance force. This would increase the chances of gaining

⁸¹ *RCWSA Evidence* II Q 13247; Ibid p 402; Ibid pp 402,273; BalPs *RMMISA 1895-1928* I 'Wood Memorandum' 4/10/00 pp 1-2. Wood argued similarly to Chesney.

⁸² AFPs 50320 'Memo by MS on Shortage of Cavalry Officers.'

⁸³ 'Lessons from the South African War Chiefly from a Cavalry Point of View' *USM XXIV* (1901), pp 249-50; WO 108/184 p 87; Maj Rodwell *Reflections on the Boer War* (Lahore 1901), pp 134-5.

surprise. Major Rodwell argued that tactical mobility was, due to the large size of European armies, acquiring strategic qualities. Grierson saw the Cavalry's future role as: 'wide adventurous turning movements against the enemy's flanks and rear,' noting that in South Africa they were reduced to acting as MI, despite being carbine-armed. His use of MI suggests that the cavalry were limited to tactical missions.⁸⁴ Grierson implied that cavalry would be used at the operational level. HW Wilson suggested that the whole army corps would be mounted as Chesney had proposed.⁸⁵ 'The Future of Our Cavalry' extolled Chesney's recommendation that the Army should consist of picked men and be largely mounted, the author then argued that smaller, better-trained forces' superiority would be based partly on their logistic advantages. Bloch had argued that huge forces were logistically unsustainable. Captain Cairnes argued similarly:

British troops have in the past fought and conquered.... vastly superior numbers on Continental soil: I cannot see why it should be so absurd...that, capably led, intelligently trained....they should not be able to do the same again...[W]e must bear in mind the very size of these great hosts will render them unwieldy...and all conditions of modern warfare, as we have learned in South Africa, favour a comparatively small but mobile army, well trained for war.⁸⁶

Col Henderson concluded that:

extraordinary results, strategical as well as tactical, that may be produced by mobility have been conclusively demonstrated [in South Africa]...[I]t is clear.... that a mounted force as mobile as the Boers, and equal-as were Sheridan's troopers to any emergency of attack or defence, will be .. most effective ... on a European theatre of war.⁸⁷

This mention of strategical again suggests a shift in mounted forces' role from the tactical. Gwynne commented:

The functions of cavalry have been proved by the recent war to be considerably enlarged. The possession of the rifle.....opens up for cavalry great fields of

⁸⁴ WO 32/6782 'Role Cavalry' 7/3/04 p 1.

⁸⁵ 'Supplement. The Story of the Boer War' NR XXXV (1900),p 34.

⁸⁶ 'The Future of Our Cavalry' BWM 169 (1901), p 715; J Bloch *Has War Become Impossible* (1899),pp3, 4-5; *A Common-sense Army* (1901),p 17.

⁸⁷ Count Sternberg *My Experiences of the Boer War* (1901), pp xxxi-ii. Henderson introduced the book.

enterprise. Cavalry can now be used for great strategical movements round an enemy's rear or against his flanks.....Cavalry in future, besides in great strategical enterprises, must find their *true* (sic) use in gaining information, in screening the movements of the main body..., and in protecting all...troops from surprise. That cavalry on the battlefield can *not* (sic) be used "to ride over masses of infantry" is no new deduction of.... South Africa. That cavalry can most effectively charge I am the last to gainsay...But it is only on occasion.⁸⁸

A range of individuals argued for greater mobility, which they saw as having strategic or, as current doctrine would define, operational level implications.

Firepower and Manoeuvre

Professor Holden-Reid emphasises that firepower and manoeuvre are inextricably linked:

[Manoeuvre warfare] is a means by which overwhelming fire can be brought to bear... and ...defeat the enemy by paralysing the enemy by speed and fire.⁸⁹

Contemporaries felt that the Cavalry's acquisition of rifles had enhanced its power of manoeuvre. The Cavalry's ability to provide covering fire and to defend increased substantially with regiments' rearmament with rifles and the addition of more machine guns, while cavalry formations received pom poms and had more rifle-armed MI incorporated in them. There was greater stress on artillery and machine gun support.⁹⁰ But French deprecated complete subordination of mobility to fire, for: 'as a natural consequence, all great tactical combinations... will be paralysed.' Here French suggests manoeuvre's operational-level effects and time's importance in combat.⁹¹

The heated debate over fire versus shock tactics continued until 1910. Dr Badsey has examined it masterfully; re-examination would be sterile, but the strength of feeling displayed during it is significant. Supporters of traditional shock, those advocating a middle course, which was to be the British cavalry's eventual preference,

⁸⁸ Gwynne *Army* pp 65-6.

⁸⁹ Ed B Holden Reid *The Science of War* (1993), p 5.

⁹⁰ WO 33/1838.

⁹¹ WO 32/6782 'Role Cavalry' 7/3/04 p 1. Brig Simpkin *Race to the Swift* (1985), pp 111-2 for fire's slowing manoeuvre-tempo.

and outright advocates of fire-only tactics, all saw cavalry as vital. All were effectively arguing for superior mobility ie the feature that would compensate for numerical inferiority. Roberts as CinC spent more time analysing South Africa's mobility lessons and cavalry weapons than he did on artillery.⁹²

Animalmastership

Manoeuvring over long distances demanded careful animalmastership. It was equally important logistically, as transport forward of railhead usually relied on beasts. Animal mortality in South Africa was vast: some 326,000 horses, 51,000 mules and 195,000 oxen. This was partly explained by the fact that: 'the standard of horsemastership in the regular forces was indifferent or bad, excepting the Artillery.'⁹³ The consequences included the failure at Poplar Grove to capture Kruger and many abortive chases in the guerrilla phase. Roberts commented:

Cavalry or [MI] ... must know how to get the utmost out of their horses by good treatment and never-failing consideration of their wants. The discouragement of individuality and the practice of training men under all circumstances...to follow precise rules is to blame.

His comment suggests initiative's pervasive importance in fields other than the strictly tactical.⁹⁴ Grierson noted that inadequate forage and poor-quality remounts had impaired mobility, but added a rider:

I do not think our cavalry save their horses enough. I never saw them leading their mounts on a march, and frequently they remained long periods in the saddle at a halt when they should have instantly dismounted.

He also criticised MI horsemastership and training. Rimington commented:

We have seen the officers and men who were ignorant of Horsemastership (sic), absolutely useless and worse than useless in war.⁹⁵

Even French acknowledged that practical cavalry horsemastership was poor, while

⁹² Eg RPs 7101-23-111-10-F 3342, Roberts/Broadwood 13/11/00; there is relatively little in his papers on the artillery lessons of South Africa.

⁹³ Smith *RAVC*, pp v-vi.

⁹⁴ Amery *THWSA* III p 564; *RCWSA Report* pp 45-6; *Ibid* p 47. Chapter 7.

⁹⁵ Brig Gen Rimington *Hints on Stable Management* (Aldershot 1905), p vi.

Brabazon was emphatic: 'something must be done to take the weight off the horse,' commenting later: 'I never saw such shameful abuse of horseflesh.'⁹⁶ Weaknesses in the AVD and an undermanned field remount organisation also hurt mobility.⁹⁷ But South African distances, the vast tonnage of forage required and insufficient transport prevented adequate animal rations being provided. The vets assessed that this had caused failure at Poplar Grove.⁹⁸ Experts began to advocate small, hardy horses able to withstand short rations and therefore to sustain manoeuvre but less suitable for shock action. Interestingly the Royals insisted on taking their Basuto ponies to France in 1914 and were impressed with their stamina and hardiness.⁹⁹

Training

Rimington blamed poor prewar training, an inspection system designed for display rather than war-efficiency and inadequate training areas for the Cavalry's problems in South Africa. Regiments dispersed in cities for policing, where training was hard, exacerbated the problem. Lt Col Wogan-Browne concurred, while French was convinced that:

[c]hiefly owing to the want of opportunity in peace time (viz., few men or horses to train, with but little ground on which to drill and manoeuvre in England) [cavalry officers] took the field less proficient ... in the tactical methods required by modern war.

He recommended:

Give troop, squadron, regimental and brigade commanders more opportunities for training their commands in open country where mounted and *dismounted* (sic) tactical exercises can be carried out in a manner resembling... actual war.¹⁰⁰

That French emphasised dismounted training suggests that cavalry tactical priorities were shifting away from close-order shock. He also advocated delegation to NCOs.

⁹⁶ *RCWSA Evidence I* p 86; *Ibid* Qs6863 &6908; WO 108/184 pp 100-1; *RCWSA Evidence II* p 301.

⁹⁷ *Sessions Remount* pp 14-15; Smith *RAVC*; *RPrs* pp18-19.

⁹⁸ Maj Gen Smith *A Veterinary History of the War in South Africa 1899-1902* (1919), pp 39-40.

⁹⁹ W Gilbey *Small Horses in Warfare* (1900), p 1; *White-Spunner Guards* p 449. There were formally no heavy cavalry in the Army, but that the Royals, traditionally Heavies, preferred small horses suggests that a deep cultural change had happened.

Dr Badsey argues that the Cavalry's problems in South Africa were largely due to errors by other-arm commanders.¹⁰¹ But criticisms by cavalymen of their own arm, acquiescence in low officer education standards and poor cavalry horsemastership suggest his judgement must be qualified. But, as the 1898 Manoeuvres demonstrated, many generals did not get the best from the arm.

Marching

Grierson commented: '[o]ne thing which has been most effectively disposed of [in South Africa], and that is the British Infantry cannot march.' Kitchener and Roberts agreed. Such was the interest generated in the topic that South Africa inspired a book on marching. It quoted frequently from *Stonewall Jackson*, arguing that superior mobility was essential to a weaker force and marching was stressed down to 1914.¹⁰²

Transport

A contemporary pamphlet contains a profound statement on logistics' importance in manoeuvre:

*"The great strategic movements of armies have depended always upon their means of obtaining food and warlike supplies." This modern perfecting of the efficiency of the interior transport of an army is a new strategical weapon in the hands of a general.*¹⁰³

Roberts' reorganisation of the transport before Kimberley's relief had similar effects to those quoted above. Later the Army planned to produce similar effects by motorizing logistics. The quotation also suggests the contemporary interest in strategy and mobility.

1899-1902 was the first war which saw relatively extensive use of MT. The

¹⁰⁰ Rimington *Cavalry* p 82; 'What is Required to improve the Training of Our Cavalry in Peace Time?' *USM XXIV* (1901); *RCWSA Evidence II* p 301; *Badsey Fire* pp 171-2.

¹⁰¹ *Badsey Fire* p 171.

¹⁰² WO108/184 p 79; *RCWSA Report* p 46; *RCWSA Evidence I* Qs 10544-6; Col Furse *The Art of Marching* (1901), pp 16-7.

¹⁰³ *Cpts Pryce & Webb Transport Training Notes* (Allahabad 1904), Introduction; original emphasised.

Germans had used traction engines in 1870 and the British had employed them in India but without lasting consequences. The Army planned from the start to use MT logistically in South Africa and MT also towed a gun into action there.¹⁰⁴ Steam engines were unsuited to South Africa. Going and weak bridges were a problem, while fuel and water were scarce. The Chief Engineer SAFF outlined MT's technical handicaps: some engines were old and there were several makes. There were insufficient trained personnel; specialist advice was often not available while engines were hampered by moving with slower animal transport.¹⁰⁵ But when conditions permitted MT proved useful. It minimized a Glanders epidemic; engines moved supplies inside the infected area. Compared to animals it was cheaper to run, could lift heavier loads and only required fuel when moving. It was faster and occupied less roadspace. Its fuel was more efficient than forage and more easily moved. By mid-1900 the WO was convinced that:

machine transport will... be substituted for animal in....war to an extent not hitherto dreamt of, and ...it will be used on the field of battle.

This suggests considerable vision; steam was technically unsuited to conditions in South Africa and had moved little tonnage there. A historical curiosity was that armoured traction engines deployed, while cars moved and powered searchlights. After the war there was considerable speculation on mechanising artillery.¹⁰⁶

Another lesson was the need to control transport. Grierson felt that poor handling of transport had impaired mobility. Mounted units' wagons followed directly after their units' main bodies, rather than moving behind the other fighting troops. Wagons were more likely to cause delays, so this order of march risked impeding combatant units. He noted that transport officers paid little attention to their orders. Poor

¹⁰⁴ WO 108/307 p 41; WO 108/249.

¹⁰⁵ WO 33/2894 'Report Steam Transport South Africa' p 3.

¹⁰⁶ Brig Gen Aston *Staff Duties and Other Subjects* (1913), pp 60-1; L/MIL/3/2135 No 70 of 31/05/00; Maj Gen Anderson 'Traction for Heavy Field Artillery' *PR41 XIX* (1902-3).

staffwork exacerbated both problems.¹⁰⁷ Grierson also criticised failure to requisition and billet extensively. Requisitioning reduced the need to transport supplies and consequently vehicle numbers, thus speeding movement. Billeting cut sickness in men and horses and reduced the need to carry tentage.¹⁰⁸ Requisitions were particularly valuable for mounted troops, who were unable to carry supplies on their horses and whose wagons could not keep up with the fighting troops. Others criticised excessive baggage and over-lavish transport. An American correspondent commented: 'we travelled like major generals.'¹⁰⁹

Implementing Mobility and Manoeuvre

The post-South African manuals reflected the new importance of manoeuvre. Here it must be noted that injunction does not automatically ensure implementation. But it does suggest the direction of thought.

The earliest official publication to reflect the above argument was the Australian *Mounted Service Manual*. The work, superintended by Hutton, a South African veteran and MI pioneer, is significant because it is a non-cavalryman's view and gives a back-bearing on British reasoning. Hutton claimed that his work had influenced Roberts. Hutton emphasised:

When the great area over which modern battles will extend, the vast range of artillery fire, the accuracy and deadly effect of modern firepower are taken into consideration, it will be understood that extreme mobility and the power of covering distances at a rapid pace... become imperative.

He continued later:

Not only, however, has the tactical value of mounted troops increased... but the very favourable conditions for the defence ... make the strategical value of mounted troops in the future as great, if not greater, than the tactical. A strategical attack upon the enemy's flank and rear by a rapid and far reaching march will compel the evacuation of a position which it may be impossible to attack [frontally].

¹⁰⁷ Churchill *Ladysmith* p 253; WO 108/184 p103; Ibid p104; Chapter 9; Glossary.

¹⁰⁸ Maj Gen Alderson *Pink and Scarlet* (1913), p220; WO 108/184 pp 108-9. Tents are heavy and bulky.

¹⁰⁹ RH Davis 'Kits and Outfits' *SM XXXVII* (1905),p 386.

Hutton stressed the strategic, or in modern parlance the operational level, noting: '[t]he value of mounted troops for strategic purposes is in direct ratio to their rapidity of movement.'¹¹⁰

CTrg 1902 began by emphasising firepower and the defence's growing strength.¹¹¹ However, it stressed mobility, manoeuvre against enemy weakness and surprise, which mounted troops, it saw, were particularly capable of inflicting. Modern manoeuvre doctrine similarly stresses targeting weakness and surprise. *CTrg 1902* contains an entire part on information and reconnaissance and another on marches. Both suggest that it attached greater importance to mobility than *IDB 1896* did.¹¹²

CTrg 1902 outlined a new concept for the British: Independent Cavalry. Neither *CDB 1898* nor *IDB 1896*'s Part V had mentioned them.¹¹³ The CinC would use this formation for key tasks, suggesting that their mission would be effectively at the operational level. Given poor contemporary signals capability, Independent Cavalry commanders would need to exercise wide initiative and bear heavy responsibilities due to the likely critical nature of their mission. This in turn suggests that doctrine would be needed to guide them.

Haig's *Cavalry Studies Strategical and Tactical* also suggests this shift of level. Two of its three dominant ideas were: 'the *strategical* employment of Cavalry [and] the role of the *Independent Cavalry Division* (sic).' Another example was that the 1909 staff ride on the Cavalry Division's strategic use.¹¹⁴ This would equate to the modern operational level.

Roberts introduced *CT 1904* by stressing the shift towards a more operational

¹¹⁰ *Mounted Service Manual* (Sydney 1902), pp xi-xii, xiii-iv; HuPs 50086 Hutton/ French 25/9/02.

¹¹¹ *CT 1902*, fire and defence pp 14-17; offence and surprise pp 17-18.

¹¹² *Ibid* respectively Part III pp 69-77; Part IV pp 78-93

¹¹³ *CTrg 1902* pp 21-2. Independent Cavalry was not a new concept in Continental doctrine.

¹¹⁴ *Cavalry Studies Strategical and Tactical* (1907), pp 1, 5. Haig emphasised Henderson's influence; WO 279/30 p 1; Table 33.

level role for cavalry:

I desire most earnestly to call to the attention of all ranks of the cavalry to the augmented importance of this branch of the Service consequent upon the introduction of far-reaching guns and rifles. Cavalry must now be considered not only the eyes of an army, and the arm by which a demoralised enemy can best be destroyed, but equipped ... with the new short rifle, it will take a part in war which it has never been able ... to take in the past.¹¹⁵

Roberts not only emphasised reconnaissance but saw cavalry mobility as the antidote to enhanced firepower. *CT 1904* was emphatic: 'mobility is one of the greatest factors of success in war.' This suggests that the cavalry's importance within the Army had increased and that this latest doctrinal work placed more emphasis on mobility as a decisive factor that *CTrg 1902* had done. It continued:

Nothing in war has a greater moral effect than surprise, not only in itself, but by reason of the *dread* (sic) of it which engenders uncertainty and anxiety, and weighs down the minds of [enemy] leaders, making their operations hesitating and slow. By its mobility, cavalry frequently has the advantage of being able to effect a surprise.

This was a vivid description of the Boers' effect on Buller or for that matter Roberts' on Cronje, echoing Jackson's phrase: 'mystify and mislead.' It also suggests modern manoeuvre doctrine's emphasis on surprise creating psychological disruption. *CT 1904* also stressed:

if [cavalry] make proper use of their mobility and act with skill and daring...in their hands to a great measure lies the success or failure of future campaigns.¹¹⁶

This again suggests cavalry's shift to the operational level and that the arm's importance had increased. Neither *CDB 1898* nor *IDB 1896*'s Part V contained a similar statement.

Others argued that the cavalry's role was shifting from the tactical. Lt Col H Gough criticised *CDB 1898*'s failure to highlight the arm's strategical importance. He argued that 'manoeuvre' and 'mobility' largely relied on timely orders. In turn these

¹¹⁵ *CT 1904* p iii.

¹¹⁶ *Ibid* p 196; Chapter 9.

depended on cavalry reconnaissance. This again suggests the importance of time in manoeuvre combat. Allenby also stressed cavalry's greater strategical value.¹¹⁷

CT 1904 highlighted the need for professionalism and: 'a higher understanding of war,' by cavalrymen. This again implies that cavalry roles were shifting from the tactical to higher levels. Neither *FAT 1902* nor *IT 1902* had similar injunctions to infantrymen or gunners, while AO 79, ending the separate entry-list for cavalry officers, stated:

In modern warfare the duties of Cavalry officers of every rank are of so responsible a nature that it is essential that they should be possessed of the highest professional attainments and be amongst the most capable intellectually.'¹¹⁸

This also links greater professionalism to the arm's new importance.

Tactical Change

The preceding section has examined the Cavalry's shift towards the operational level and the arm's increased importance. This section looks at the change of emphasis in its tactical tasks. The first signs of this came in 1900 when the Indian IGC stressed dismounted duties and reconnaissance. This may reflect lessons from the 1897-8 Frontier campaigns as well as South Africa, as his conclusions were based on inspections dating back to 1898.¹¹⁹

CTrg 1902 emphasised reconnaissance and protection and saw manoeuvre as more usual than shock. It also stressed fire and dismounted action by mobile forces.¹²⁰ *CTrg 1902* used the generic term, mounted troops, which embraces MI and therefore implies less use of shock. Contrastingly *IDB 1896*'s Part V referred to cavalry and MI.

¹¹⁷ 'The Strategical Employment of Cavalry' *JRUSI* XLIX (1905); Gough sought to analyse principles, suggesting a more doctrinal approach, Chapter 9; Gen Bernhardt 'Cavalry in Future Wars' *CJ II* (1907), p 227.

¹¹⁸ *CT 1904* p 200; Chapter 9 examines French's attempts to inculcate strategy and argues that it was connected with developing doctrine which adopting manoeuvre demanded; WO 123/45 p3 dated 1903.

¹¹⁹ L/MIL/7/15140 'Notes for the Guidance of Cavalry Officers in India 1900 10/04/00, 'Sections X & XI.

¹²⁰ *CTrg 1902* p 14.

CTrg 1902 accentuated interarm cooperation and contained a section on operational staffwork. Both would have enhanced the Army's manoeuvrability.¹²¹ There was much in *CTrg 1902* on protective duties; these now formed a significant cavalry task which *IDB 1896*'s Part V had not stressed.¹²² Emphasising security denied the enemy information, in turn this increased the chance of decisive manoeuvre.

CDB 1898 had stressed shock. *CT 1904* assessed cavalry's tactical roles differently:

The three *first* and *chief* duties of cavalry are: 1. Reconnaissance... 2. The service of local security. 3. To prevent the enemy's cavalry obtaining information.¹²³

The latter tasks reflect surprise's importance in warfare. That 2 topics involved information reflects the new importance attached to manoeuvre which emphasises reconnaissance and surprise.

CT 1904 stressed shooting, omitted from *CDB 1898*. It also emphasised the combination of rifles, machine guns and RHA covering mounted attacks more than *CDB 1898* had. The GS later criticised Childers for dismissing covering fire's value in supporting mounted action. Their emphasis suggests that it was now fully appreciated. Cavalry/RHA cooperation increased after 1902. Here it may be noted that increased fire support was seen as essential in enabling shock action in 1918. *CT 1904* emphasised shock in open-order, more flexible than the old boot-to-boot formations and less exigent of training time.¹²⁴ Also it highlighted the use of ground more than *CDB 1898* had done.¹²⁵

¹²¹ Ibid Part II pp 59-68. Initiative was also stressed.

¹²² Ibid pp 113,123; Chapter 6.

¹²³ *CT 1904* p 197.

¹²⁴ *CT 1904* pp 47-8,322,331-362; *CDB 1898* p 378, its preceding pages do not emphasise covering fire. 'GS' 'War and the Arme Blanche' *JRUSI LIV* (1910),p 1062. They felt Childers downplayed covering fire as it was an argument for shock; Capt Falls *Military Operations Egypt and Palestine II* (1930),pp 644-5.

¹²⁵ *CT 1904* pp 208,217.

Reconnaissance

CTrg 1902 stated that: '[s]uccess in war depends on timely information.'

Consequently it saw reconnaissance as the Cavalry's most important role, though it noted the difficulties which the task now faced. This emphasis on reconnaissance, generally by cavalry, supports the idea that Army was shifting towards manoeuvre as this demands searching ground-based reconnaissance over extended distances. Such reconnaissance in positional, attritional fighting it is impossible.¹²⁶ Contemporaries felt that the difficulties which reconnaissance now faced were not entirely a defensive advantage. An attacker could manoeuvre behind a screen, made impenetrable by modern firepower, thus defeating the defenders' scouts and increasing his chances of surprise.¹²⁷

CT 1904 emphasised reconnaissance more than *CDB 1898* did.¹²⁸ Another new feature was that the former urged developing self-reliance. All young cavalry officers were to be trained as scouts, as were many troopers.¹²⁹ In the following years there were several major Cavalry reconnaissance exercises and much low-level scout training.¹³⁰ In 1906 the IGC held a competition to improve horsemastership, scouting and despatch-riding. Hamilton, GOC Southern Command, also noted in 1906 that South Africa had improved cavalry reconnaissance and skirmishing substantially. Haig when IGC India set many reconnaissance exercises; Rimington ran similar schemes.¹³¹

¹²⁶ *Notes on Soviet Ground Forces* (1972), pp 3-14 to 5, Soviet norms demanded ground reconnaissance some 50 kilometres ahead of the leading fighting echelon. It should be noted this was in an age of airborne and electronic reconnaissance. Though the greater speed of defenders meant more depth of reconnaissance was needed, this suggests that deep reconnaissance is important in deep manoeuvre.

¹²⁷ *CTrg 1902* pp 13, 18, 21-4; *Ibid* p 69.

¹²⁸ *CDB 1898* pp 283-4 saw reconnaissance as important, but was less emphatic.

¹²⁹ *CT 1904* p 197; *CDB 1898* p 285; *CT 1904* pp 220-234.

¹³⁰ 'Special Correspondent' 'The Second Cavalry Brigade in Sussex' *CJ* 1 (1906) pp 448-9 for Byng's emphasis on reconnaissance. Chapter 7 examines scouting and service pay.

¹³¹ 'Reconnaissance Competition 1906' *CJ* II (1907), p113; 'Training of the Troops during 1906' *JRUSI* L (1906), p 1517; WO 279/516 '3 Cavalry Bde Manoeuvres 3-15/8/03' p 1.

Training

Cavalry training, like training generally, was transformed after South Africa. Dr Badsey argues that the appointment of Baden-Powell as IGC was Roberts' attempt to enforce tactical change, but it is plausible that he was selected for his training abilities and his encouragement of individualism. That Baden-Powell had served before 1899 in India, where training was more realistic than in Britain, reinforces this argument. Two cavalry schools and a professional journal were established, thus giving the Cavalry a stronger institutional focus. These schools adopted new methods of training and several able officers instructed at them.¹³² *CT 1904*, unlike *CDB 1898*, emphasised officers' training responsibilities:

squadron commanders are personally responsible for the efficiency of their squadrons... The main object of cavalry training is to bring men ... to the highest possible standard of war efficiency in their war duties.¹³³

More cavalry exercises occurred in both India and Britain than before 1899. Here it is worth emphasising that attitudes to training were changing. Both Vaughan and Gough were highly critical of Scobell's lackadaisical attitudes to training and staffwork when he was their brigadier. French eventually dismissed Scobell as IGC despite the latter's impeccable social connections and fine South African record, for neglecting training. Haig ran several major cavalry staff rides. In unit training Haig stressed skirmishing and dismounted reconnaissance, recommending that pickets entrench automatically. All suggest a swing from shock towards detached duties. Exact comparisons are hard as the equivalent records for pre-1899 IGCs do not exist. But, judging from descriptions of Luck's close-order field days in the 1890s, Luck stressed mounted drill and shock. But Luck probably had to emphasise these, given the poor standards of

¹³²Badsey 'Fire' pp195-6 notes Baden-Powell's attention to reconnaissance encouraging low-level groups, reconnaissance and protective training, WO 32/8865 'letter to CinCs;' RSM Plumb cited Chapter 7.

¹³³ *CT 1904* p 19. Sections 1-10 pp 19-30 cover the training system; *CDB 1898* pp 407-410 lacks general emphasis on training and the section quoted concentrates on the mechanics.

many COs and regiments before 1899.¹³⁴

Professor Spiers states that 70% of cavalry training after 1902 involved shock, but this statistic, for which he does not provide a direct reference, is questionable.¹³⁵ By 1904 cavalry in India were outshooting the Infantry. Had 70% of their training been shock-orientated, this is unlikely to have been possible. It should also be noted that, due to stable duties, cavalry had less training time than the Infantry. It is very possible that 70% of major manoeuvres involved shock as numbers were needed for it. But manoeuvres also incorporated much reconnaissance and protective training.¹³⁶ But low-level training can teach reconnaissance, unlike shock, which demands massed troops. Low-level reconnaissance training was less likely to be recorded than major exercises involving shock.¹³⁷

MT, Transport and Logistics

The development of logistics from 1902 suggests that the Army was enhancing its capacity to sustain manoeuvre. Motorisation after 1902 was a long process, which was incomplete in 1914. Between 1899-1902 steam had been the prime form of MT, but by 1905 the ASC were arguing for internal combustion. It was not dependent on water, was better suited to campaigning and cheaper, while petrol was easier to handle than coal. As early as late 1901 motorcars and motor lorries were tested. Afterwards the trials staff recommended developing internal combustion propulsion. In 1902 traction engines moved the Corps Ammunition Park.¹³⁸ In 1903 the MVC was formed;

¹³⁴HPs 3155-40 'Inspection notebooks;' Anglesey *A History of the British Cavalry* III (1982),pp 150-1; HPs 3155-40 'Season 1903-1904 Inspection Notes.' Morrison 'Manoeuvres' p 638 for Luck's exacting precision. Maj Gen Vaughan *Cavalry and Sporting Memories* (Bala 1954),pp 110-1, Gen Gough *Soldiering On* (1954),pp 91-2.

¹³⁵ 'British Cavalry 1902-14' *JSAHR* LVII (1979),p 79.

¹³⁶ Eg WO 279/ 39 'Report Army Manoeuvres 1910, pp 61-2 for the importance of reconnaissance during manoeuvres and the attention paid to it during post-exercise analysis.

¹³⁷ WO 279/30 pp 7-9; Haig listed many points on reconnaissance, Ibid pp 10-11; Eg Sgt Vass 'A Narrow Escape' *12 RLJ* I (1909), 'Patrol Duty in India' *TE* II (1908). Neither of these 2 exercises even figure in a regimental history.

¹³⁸ *ANG* XLII (1901),p 1233; Maj McNalty 'The Supercession of Steam ... for Military ... Vehicles' *ASCQ* I (1905), p 76; *Trials of Self-Propelled Lorries for Military Purposes ... 1901* (1902),p 7.

by October 1904 it had driven over 100,000 miles, largely supporting training.¹³⁹ It was the first corps of its kind in Europe. In 1906 MT was recommended for its speed, shorter column-lengths and economy. Also in 1906 motor cars were sufficiently common in India for an officer to write a book on their use there. Haig, criticised as technologically-averse, recommended motorcyclists and WT to improve cavalry communications.¹⁴⁰

CTrg 1902 emphasised that transport had to be deployed correctly on marches and that tactical considerations must prevail over administrative convenience. Manoeuvre reports stressed controlling transport.¹⁴¹ The ASC reviewed vehicle designs to improve mobility and efficiency, using South African experience and data from the Boxer Rebellion. ASC officers were keen to rationalise supplies and improve procedures to enhance mobility.¹⁴² The ASC increased by over 1200 men after 1902, but the most significant development was the motorization of the BEF's second and third-line transport. Maj Gen Altham saw this as: 'not merely an administrative gain... but... a new departure with important strategical and even tactical consequences.' The change was carefully trialled, practised on manoeuvres and professionally debated. The BEF mobilised with the greatest proportion of MT to strength of all the armies in 1914. Furthermore the British had motorised one arm, the RFC, holding that horses were unsuited to support aircraft.¹⁴³

The third logistic innovation was that the Army systemised requisitioning and billeting. Van Creveld suggests that Germans requisitioned spontaneously in 1914, but the British deliberately planned to do so. Requisitioning had great potential: '[t]wenty-

¹³⁹ Capt Paynter 'The Use of the Motor Car in Warfare' *JRUSI L* (1906), pp 767-8.

¹⁴⁰ WO 279/9 'GS Conference' pp 76-7; Table 16; Maj Warren *The Motor Car in India* (Bombay 1906); WO 279/30 pp 18-19, 21.

¹⁴¹ *CTrg 1902* pp 81-3, this tackled Grierson's criticisms. Glossary; WO 279/527 p 10.

¹⁴² WO 33/216 'Co Transport Vehicles' 18/11/01; WO 32/6150; Richardson *ASC* pp 143, 151-2.

¹⁴³ Altham *Principles* p 50; Table 16; eg [ASC] *Training IV [MT]* (1912), *Memorandum Reorganised System of Supply ... Introduction of [MT] 1912*, *Supply Manual (War) 1909* (1912 edition); Table 44.

five percent less transport to provide... twenty-five percent less to feed, maintain and keep efficient.¹⁴⁴ Fewer vehicles meant shorter columns and consequently faster movement. Fewer animals meant that less forage was needed. Wilson as Commandant of Camberley advocated requisitioning and billeting to DSD. *FSRs 1909* included instructions on requisitioning, and there was a major cavalry billeting exercise in 1910.¹⁴⁵ Both requisitioning and billeting were particularly relevant to European conditions and were largely new skills for the British. Their systematic adoption suggests the switch towards European warfare. In summary the Army's logistics changed extensively after 1902 to enhance mobility.¹⁴⁶

Animalmastership

Animalmastership, principally the Cavalry's care of horses, was radically overhauled, particularly as it was anticipated that long-range fire would force wider movements. Loads on horses were cut and AO 3 of 1902 'The Care of Horses,' based directly on South Africa, was widely issued. Later a manual stressed:

Every mounted man should regard his horse as part of himself, and should remember that his efficiency and his safety on service depend on the fitness of his horse.¹⁴⁷

Manuals and training emphasised animalmastership, while several long-distance riding competitions were held to promote horsemastership. The Army's veterinary and remount organisations were overhauled with significant results in 1914.¹⁴⁸ Sordet's Cavalry Corps was crippled by sorebacked horses and found completing a key mission hard. By the Marne Moltke complained that there was not a horse capable of trotting,

¹⁴⁴ Lt Col Greenly *Notes on Billeting for Cavalry* (1913), pp 3-4; *Crevelld Supplying* p 123; WO 279/9 p 69.

¹⁴⁵ HEWPs 3/3/9 HW/DSD 30/10/07; *SIULRs 1911*; WO 279/529.

¹⁴⁶ Col Beadon *The [RASC] II* (Cambridge 1930), Chapters 1-3.

¹⁴⁷ Amery *THWSA VI* p445; WO 123/44; *The Manual of Horse and Stable Management* (1904), p 5.

¹⁴⁸ *CT 1904* pp ix, 19; Maj Geddes 'Officers' Despatch Riding Competition...' *PRAI XXIX* (1902-3). Some were held in India, but such competitions have not been traced in Britain pre-1899; Amery *THWSA VI* pp 422-3; S Corvi 'The Man/Horse Relationship 1914-18' lecture to the War Studies Society King's College.

this in an army reliant on mobility for victory. Bridges compared the armies:

Our horse-mastership was good, that of the German was inferior and the French (who ...never got off) was bad. The British cavalryman walked nearly as often as he rode, [thus] his horse... kept condition remarkably well.¹⁴⁹

Bridges wrote long afterwards but his conclusion is well supported.

Marching

British Infantry had marched well in South Africa, surprising some commentators. The emphasis was kept up in training afterwards. From 1902 most manoeuvres involved formidable marches. This was a conscious choice for an army, which had to offset numerical inferiority by superior mobility. The strongest endorsement was in Kitchener's Infantry Tests which were centred on marching and shooting. Pte Richards described his CO's priorities:

He did not believe in too much ceremonial drill: the ability to march and shoot straight were the two chief things he required.

Practical measures improved marching. Maj Ruck-Keene noted that there was far less falling-out on marches due to better food and the establishment of soldier-chiropodists.¹⁵⁰

Conclusions

South Africa demonstrated that both tactical mobility and operational level manoeuvre were essential in modern warfare. Colonial warfare had put a premium on combat and firepower, but as the Sudan demonstrated, its mobility was logistical, rather than the speed and sweeping manoeuvre needed for major warfare. After 1902 the British emphasised manoeuvre, tempo and pre-emption as they faced fighting greater numbers. Manoeuvre had implications for initiative, doctrine and training,

¹⁴⁹ Brig Gen Edmonds *MOFB 1914 I* (1922), p 266; K Helfferich *Der Weltkrieg II* (Berlin 1919), pp 17-8. Lt Gen Bridges *Alarms and Excursions* (1938), p 81.

¹⁵⁰ Maj Ruck-Keene 'Summer Training, 1908' *OXLIC 1908* p 119; Altham *Principles* p 402; Pte Richards *Old Soldier Sahib* (1935), p 163. This secondary source is well supported. It is included as it emphasises that these priorities were clear to privates.

which Chapters 7 and 9 analyse.¹⁵¹

Before 1900 general tactics, particularly in colonial warfare, had largely emphasised frontal attack. Cavalry were at a discount due to the absence of a major threat and the arm's tactics were focussed on tactical shock. Afterwards the British put greater emphasis on an arm which had for much of the 19th Century been seen as less useful than the others. There was a shift in cavalry's roles towards operational level manoeuvre over extended distances. The new tactical emphasis naturally enhanced the Army's capability for surprise and tempo. Cavalry tactics changed with more attention to manoeuvre, reconnaissance, pre-emption, protection and firepower. In 1914 the BEF deployed with the highest ratio of cavalry to infantry divisions. The ratio, 1:2, is in striking contrast both to the continental average in 1914 and to the SAFF in 1899.¹⁵²

The tactical changes to mobility were complemented by logistical enhancements, improved animalmastership, the introduction of MT and the alterations to C³ analysed in Chapter 9. The Army in 1914 was far more capable of manoeuvre than in 1899.

¹⁵¹ Roberts' march from Kabul to Kandahar lasted some 24 days with the average march of some 13 miles, Dr Peaty 'Wars in Afghanistan' IHR 9/1/07. This was not the speed or tempo that conventional warfare demanded.

¹⁵² Brig Gen Wilson *Initiative and the Power of Manoeuvre* (AMS 1910), p 7; Table 9.

Chapter 6 Protection

*Only a Kensington draper,
Only pretending to scout,
Only bad news for the papers,
Only another knockout.*

Introduction

This Chapter analyses protection as a tactical factor, its state in the British Army in 1897, its execution in 1899-1902, the resulting lessons and their implementation. It also examines the REs. Sappers are split between the two tactical factors of protection and mobility, but are considered here for convenience. It also examines technology, due to its links with the engineers.

Protection

Protection is more elusive than either firepower or mobility and, unlike them, is generally defensive in nature as it does not threaten the enemy directly. It can be attained physically; armour saw a renaissance with the introduction of shielded QF artillery. It can be achieved by using ground, cover, camouflage and extension. These factors broadly constitute fieldcraft. Fieldcraft, ultimately a personal skill, requires individual initiative to be effective, as Kipling suggests above. It has powerful effects. Lanchester argued that fieldcraft counterbalances numerical superiority, favouring more advanced weapons. He concluded that South Africa had demonstrated both points.¹ Furthermore it can be deduced that fieldcraft and more advanced weapons demand better trained soldiers capable of showing initiative if they are to be effective. The improvements, examined in Chapter 7, support this argument.

Protection also encompasses entrenchment and fortification. Both are strong though time-consuming antidotes to firepower, but, when overemphasised, both impair mobility and the ability to react. Protection also includes outposts and the defensive

¹ Chapters 7&8; *Aircraft in War* (1916), p 29. Lanchester argued that fieldcraft prevented the enemy concentrating fire on advanced systems, thus aiding their survival. Fire directed at areas rather than at point targets is less lethal.

itself.² But it is not solely defensive. Troops have to entrench in attack, fieldcraft is equally important then, while unwary sentries are always lethal. Protection also generates surprise by denying the enemy information.³ Essentially though, it is defensive in nature. The shattering effects of fire and manoeuvre may, fully exploited, enable attacking forces to gain the initiative so strongly that effective counter-action at gaping protective weakness is impossible.⁴

In 1899, as now, defence was not emphasised as much as attack. This is a recurrent doctrinal trend.⁵ Even when a nation's strategy is defensive, the military advantages of initiation, tempo, surprise and concentration against weakness are attractive and benefit morale. Battles may have been lost through protective failures, but it is hard to demonstrate that protection alone has won any.

Protection, when implemented, is generally tactically low-level. A general may initiate sweeping manoeuvre to further his plan and his CRA will co-ordinate massed fire in support. A formation may have a protective scheme but its detailed implementation depends on subalterns, sergeants and soldiers. A clubbed manoeuvre or botched fire plan probably stem from command failures. Contrastingly defective protection is generally due to low-level failure, as Kipling suggests. The passive nature of protection explains this phenomenon. Firepower and manoeuvre due to their strongly offensive nature are less dependent on all components functioning correctly. Other elements can compensate for mistakes. In a 500-barrel fire plan that one or two batteries miss is probably unimportant. But protection, which is passive, cannot rely on other parts compensating as the enemy is able to concentrate on the point of vulnerability. A few unalert sentries nearly led to Ladysmith falling. Methuen's defeat at Tweebosch

² Gazala and DESERT STORM make the point. Wellington deprecated trenches in field combat for the same reason.

³ Capt Swinton *The Defence of Duffer's Drift* (1904), pp 25,30.

⁴ R Holmes *Army Battlefield Guide Belgium and Northern France* (1995), pp 183-4. Dynamic manoeuvre, devastating firepower and defective Allied C3 prevented coordinated counter-action at gaping German protective weaknesses.

was due to a variety of individual failures, with a major the senior responsible officer; at Sannah's Post, an NCO. Such faults suggest defective discipline and training.⁶

Protection before 1899

Primitive, poorly-armed, ill-disciplined tribal foes were rarely able to exploit British protective weaknesses systematically before 1899, though raids and ambushes were a constant tribal tactic.⁷ Primitive enemy tactics and weapons meant that entrenchment, extension and fieldcraft were therefore not essential. Enemy night attacks were rare, thus British outposts were rarely rigorously tested. Here Tirah forms an exception.⁸ Consequently training in fieldcraft and protection was generally poor. Outposts were practised, but this was undemanding. *IDB 1896* suggested that training: 'should start at dusk and need not exceed from 2 to 3 hours' work.' This did not replicate the problems of vigilance on operations. Nor did *IDB 1896* stress concealing outposts. British manoeuvres with their non-tactical overnight phases were also poor at teaching outposts. Wolseley criticised the 1899 Manoeuvres for lacking pace, but feared that all-night training would hit recruiting.⁹ *IDB 1896*'s orders on outposts were mechanically sound, but poor initiative and training meant that their execution was often poor.

Many infantrymen were untrained in using cover; doing so would, it was feared, make them overcautious. The RCWSA heard conflicting evidence on how widespread training in using cover was before 1899. *IDB 1896* recommended using cover but concluded that: 'the utilization of cover in attack is subordinate to order and cohesion.'

⁵ *AFM I The Fundamentals* (1985), p 43; EC Kiesling *Arming Against Hitler* (Lawrence 1996), p 137.

⁶ Brig Gen Edmonds & Capt Wynne *MOFB 1915 I* (1927), p 92. At Neuve Chapelle 2 batteries failed to support a brigade, despite this the operation was initially successful; fn below; *IT 1902* supports Kipling; RPs 7101-23-209 'On a proposal that a military officer ... should be tried by a Court-martial' pp 11-2.

⁷ Maj Callwell *Small Wars* (1899), p 389.

⁸ *Ibid* p 391 emphasises that night attacks were rare in Colonial warfare; Chapter 2.

⁹ *IDB 1896* pp 221, 189-193; 'British Staff Officer' *An Absent Minded War* (nd), pp 98-9; Chapter 7; *The Times* 28/2/01.

It overestimated officers' ability to control in the face of modern firepower.¹⁰ Nor did *IDB 1896*'s S47 'Open Order Drill' insist that recruits were individually trained in fieldcraft. It merely suggested that they should be shown how to use cover. Weak recruit instruction hit army-wide standards. *IDB 1896* did not explain how to use cover. It ordered that movement between cover was to be made upright, unless ordered otherwise, as: 'in which [position] the movements and the signals of their leader can most readily be observed.' *IDB 1896* saw control as more important than cover.¹¹ Furthermore that S47 was entitled 'Drill' suggests that its instructions were to be rigidly applied:

cover is only a means to an end, and that when the soldier has been launched in the attack, he must push forward at all hazards

This did not encourage fieldcraft, nor did it reflect the realities of firepower. Col Macdonald observed a battalion deploying on a hillside as if on a barrack square. There it would have been easier for it to have used cover rather than deploying in drill-order as it did.¹² Even in LI units, which emphasised skirmishing, fieldcraft was poor before 1899. Crum, instructing riflemen, commented:

when left to themselves [they] seem quite hopeless...Some didn't even know which side of a hill to take cover.¹³

Crum suggests a connection between initiative and fieldcraft. Roberts later attributed poor performance of tasks demanding initiative like fieldcraft to over-control by commanders.¹⁴

Before 1899 extension was downplayed, formations were dense, and consequently

¹⁰ Historically individuals ducking were criticised, J Keegan *The Face of Battle* (1976), p 178, this recurred in 1899, J Stuart *Pictures of War* (1901), p 67; Maj Gen Bengough *Notes and Reflections on the Boer War* (1900), pp 26-7 claimed that infantrymen were untrained in using cover. Coke contradicted him, *RCWSA Evidence II* p 444; *IDB 1896* pp 280-1.

¹¹ *IDB 1896* p 62; Hutchinson and Pollock, cited in Chapter 2, support this argument.

¹² Col Macdonald 'Infantry in a New Century' *JRUSI XLV* (1901), p 243.

¹³ Chapter 2; Maj Crum *Memoirs of a Rifleman Scout South Africa 1899-1902* (Helensburgh nd), p 9, they were in theory trained soldiers serving in a foreign-based unit; SLI recruits got fieldcraft training, Maj Pollock 'Training Recruits at Regimental Depots' *JRUSI XLVI* (1902), pp 677-9.

¹⁴ *RCWSA Report* (1903), p 46.

ground could not be used effectively. *IDB 1896* suggested an 800 yard frontage for an infantry division attacking 2 brigades up. A popular guide recommended 30 inches between men in extended-order. There was much unofficial use of normal formations. Troops so deployed spent more attention conforming to templates than to terrain. Crum criticised lethally dense formations during prewar training. Similar dense formations were used initially in Tirah.¹⁵ These defects stemmed from a system which overemphasised control, downplayed delegation and underestimated firepower.

IDB 1896 covered defence in some 5 pages, recommending a rather formalised three-line deployment borrowed from the attack. This layout incorporated some depth by virtue of its 3 lines, but *IDB 1896* gave no useful instruction on using ground, reverse slopes or concealment in defence. This suggests a failure to understand either the effects of smokeless ammunition or modern weapons. It recommended a norm of five men per pace of defensive front. This would have meant a divisional frontage of about a mile; far denser than contemporary weapons required. But *IDB 1896* warned against exposing machine guns to artillery and outlined the use of 'false fronts.'¹⁶

Land restrictions meant that troops rarely entrenched on British manoeuvres.

General Leach concluded:

Where ground cannot be broken, and where in peace manoeuvres, shelter trenches are represented by screens, it is clear that the instruction to the troops cannot be great.

IDB 1896 treated digging as a drill, giving no useful tactical advice. Its recommended design, the shelter-trench, was wide, shallow and had a prominent spoil-heap in front, betraying its position. It provided poor protection. Too often digging was seen as an RE, not an all-arms skill. Units dug poorly in training, while service tools were bad-

¹⁵ Glossary; *IDB 1896* p 143; Ibid p 147. It should not be imagined that *IDB 1896* advocated an advance shoulder to shoulder, as British formations had considerable depth. However, with 2 brigades on such a frontage, ground could not be used effectively. Hamilton deployed a battalion (-) on virtually the same distance at Elands-laagte, Chapter 3; *Crum Scout* pp 10-11; Chapter 2.

¹⁶ *IDB 1896* pp 120-126; Capt Slessor *The 2nd Battalion Derbyshire Regiment in Tirah* (1900), p 93; Chapter 2; *IDB 1896* p 149; Table 39; Glossary.

quality.¹⁷ Though the manuals did not stress concealing either defences or men, the Army ordered that all guns sent to South Africa were to be painted khaki. This was the Army's field-clothing colour and in this respect the British were ahead of continental armies.¹⁸

IDB 1896's Part V did not cover engineers or their tasks in all-arms tactics. Manoeuvres were short and as sappers were required for logistic tasks, eg constructing camps, there was little chance of other arms learning much about their tactical use. The 1898 Manoeuvres caused Wood, the AG, to form a committee under Hilyard to remedy the problem. The Committee criticised *IDB 1896's* omission of sappers, proposing more interarm training, guidance on RE duties and better engineer training. *IDB 1896* was amended accordingly in 1900.¹⁹

Clearly entrenchment, fieldcraft and concealment were undervalued before 1899. Over-control and failure to appreciate the growth of firepower had caused these protective weaknesses. Tirah, as Chapter 2 argues, had improved protective training. But there was insufficient time to remedy the above defects before the start of the South African War.

Protection in South Africa

This section analyses protection in the war. Extension is important as it shows the effect of increased firepower and how the spatial nature of combat was changing. Increased emphasis on using ground suggests a similar appreciation of firepower. When combined with extension and fieldcraft, it suggests why initiative was more necessary. Entrenchment is closely connected with increased firepower which also affected outpost and defensive tactics.

¹⁷WO 32/6082 p 21; *IDB 1896* pp 266-8; Plate XVI; Maj Callwell *The Tactics of To-day* (1900), pp 140-1; A Conan-Doyle *The Great Boer War* (1900), p 517; Glossary.

¹⁸ *RCWSA Evidence II* p 662; WO 108/307 p 54. Germany introduced *feld grau* just before 1914 while the French introduced *bleu horizon* during the war.

¹⁹WO 32/6082 p 4; *Ibid* p 11-12.

Extension

Generally British troops extended reasonably fast during combat, suggesting that norms seen as late as 1898 had changed substantially.²⁰ Henderson's 'Technical Training,' Buller's 1899 Memorandum and Roberts' emphasis on skirmishing had probably caused this. But there were exceptions.²¹ One was Hart's advance in quarter column at Colenso. Hart drilled his brigade before action and tried to ensure that they deployed in quick rather than double time when coming under fire. It would be tempting to dismiss Hart as a reactionary, but his stress on control and order was fully in accordance with modern Continental ideas and *IDB 1896*.²² But Burleigh reported Hart's brigade as rather bunched before Spion Kop. This contrasted with another advance which Burleigh observed in late November 1899 with 10 paces between men and 50-150 between lines. By December 1899 a norm of 5 paces' extension seems to have been usual for infantry in South Africa. Later troops extended up to 30 paces.²³

The Use of Ground

Initially ground was often used poorly in South Africa. Prewar close-order formations meant that subordinates did not need to select ground themselves and were unused to exercising initiative in the field. Capt Cairnes commented:

The most striking lesson ... is that our men have not, as a rule, the most elementary knowledge of how to avail themselves of accidents of ground to gain cover from the fire of their enemy... [T]hey did not know how to do so. Over and over again men have been seen contentedly taking cover behind some ridiculous little stone, with a fold in the ground beside them unnoticed which would have sheltered a section.²⁴

Maj Caunter criticised poor infantry use of cover, while Major Baden-Powell felt that using ground had: 'not been sufficiently studied' before 1899. Colonel Vincent

²⁰ PRO 30/40/16 'Untitled Memorandum on weapons.'

²¹ 'HRK' 'South Africa 1899-1900' *HLIC IV* (1904), pp 50,52; Chapter 2.

²² LS Amery *THWSA II* (1902), pp 400-1,402-3; Ibid p 445; JPs 'Diary 15/12/99;' Chapter 2.

²³ *The Natal Campaign* (1900), pp 314, 109; Henderson Science p 373; Ed RG Stockman *The Boer War Diaries of Major HG Shute and Private GJ Gullick* (1999), p 13. These are reprinted contemporary diaries; Lt Col May *A Retrospect of the War in South Africa* (1901), p 189.

²⁴ 'The Military Critic' *The Westminster Gazette* 'Some Lessons of the Boer War' NR 35 (1900), p 1034.

contrasted the Boers' 'scientific' use of cover with British failures.²⁵ Maj Pollock noted:

The experiences of ... the Boer War should have impressed on all officers the immense importance of thoroughly educating themselves in the "use of ground." The very essence of sound tactical leading is a quick appreciation of every detail, artificial as well as natural...

Later he remarked:

The successes of the Boers have been due to their common-sense *use of ground* (sic)... [T]he average British officer has no military eye for country.²⁶

Pollock blamed artificial training and over-control for this fault. His argument was similar to Henderson's criticisms of normal formations. Pollock emphasised using ground throughout his work. Both he and Henderson saw that initiative was essential for effective fieldcraft.²⁷ Lt Col Alderson emphasised that studying ground was a basic military requirement. Gen French stressed using ground and cover in training, linking improved performance in both to greater soldier intelligence.²⁸

Poor use of ground led to badly-sited trenches as Swinton emphasised in *Duffer's Drift*. Ostensibly a work of fiction:

[i]t embodies some recollection of things actually done and undone in South Africa... Should this tale, by arousing the imagination, assist to prevent in the future even one such case of disregard of principles, it will not have been written in vain.

It emphasised concealment, selection of positions and developing an eye for ground.

One of its hero's, the hapless Backsight-Forethought, most egregious errors was siting trenches when standing up. Kitchener noted that:

instructions on the construction of intrenchments (sic)... did not sufficiently accentuate the importance of adapting the actual work to the ... the ground.

Roberts blamed many wartime failures on: 'officers not understanding how to take

²⁵ Glossary; *The Campaign in the Free State and its Lessons* (1901), p 34. *War in Practice* (1903), p 108; Chapter 5; Vincent 'Lessons of the War in South Africa' *JRUSI* XLIV (1900), pp 631-2.

²⁶ *Simple Lectures for Company Field Training* (1900), pp 1, 10.

²⁷ *Ibid*, pp 34-40, Pollock cited 17 lessons, ground figures in 9 and is the main topic of 3.

²⁸ Alderson *100* pp 39-41; AFPs 50321 'Training... Aldershot 1905' p 153.

advantage of ground.' Later a French officer saw a key 1899-1902 lesson as: '[m]aking full use of the topographical features of the country.'²⁹ This suggests that other armies were also poor at using ground.

Here it is worth emphasising that the tactical use of ground relates to the weapons in use at the time. Though the above evidence suggests that ground was barely used before 1899, the real problem was perhaps a mental hangover from the era of shorter-ranged, less effective weapons. But, whatever the reason, British use of ground was poor, suggesting defective training, poor initiative and failure to deduce the effects of greater firepower.

Fieldcraft in South Africa

The defects analysed above, particularly defective initiative, meant that British fieldcraft was initially weak. Callwell made a sound point: '[t]he Boers have used their wits and we have not; hence the numerous petty disasters which have marred the progress of the campaign.' Roberts noted that:

In the attack the men were even more oblivious of cover than on the defence; and on scouting and outpost duty it was long before they learned the importance of invisibility.

He blamed poor training and over-control for these problems. A CO cited an example:

A young officer...demanded permission to move his company slightly as his men were commencing to suffer... He knew what to do, but feared to take such a small piece of responsibility... meanwhile his men were dropping.³⁰

This again suggests that the link between fieldcraft and initiative. A magazine reported that:

reluctance to take cover is the ineradical (sic) vice and nothing short of the cultivation of the general intelligence of the rank and file will banish this fault.³¹

Individual fieldcraft was poor.³² Henderson cited a South African veteran:

the average British infantryman usually exposes half his body... and frequently

²⁹ Swinton *Duffer's* p 29; Ibid Preface; Ibid, made in the contrast between Dreams 5&6; Ibid p 47; RPs 7101-23-122-8 Roberts/Hamilton 7/12/04; *RCWSA Report* (1903), p 47; Col Beca *A Study of the Development of Infantry Tactics* (1911), pp 62-3.

³⁰ *RCWSA Report* p 46; *Akers-Douglas Report* (1902), p 51.

³¹ 'The Arms of the Service II Cavalry' *SR* 92 (1901), p 104.

³² Callwell *Tactics* p 133.

puts himself into such a position that he can neither aim accurately nor shoot quickly. This is one of the criticisms most frequently heard among the Boers.

But *MRs 1898* ignored shooting from cover. An American attaché observed:

[British] Infantry never make rushes in their attacks but march erect and calmly forward. I have seen mounted men under a hot rifle-fire at short range halted, waiting for orders to advance, sitting erect on their horses, a perfect target.³³

The former contravened *IDB 1896*'s S54 which recommended rushes, the latter was poor horsemanship. Both showed dire fieldcraft. Significantly the MA then criticised British soldiers for lacking initiative, reinforcing the link, suggested above, between the two. Colvile, concerned with the standard of fieldcraft in his brigade, ordered that his guardsmen were trained like deerstalkers. Vincent criticised British officers' personal reluctance to use cover, particularly in attack. This partly accounts for their heavy initial casualties.³⁴ Alderson emphasised using ground tactically, citing many examples of poor fieldcraft: '[t]he British soldier, if not *constantly* (sic) reminded *will* walk about on the skyline.' He continued:

Another necessary "battle habit" is that of taking cover. Unless men are trained to do this at manoeuvres, when in action they do so from the instinct of self-preservation.

This quotation is apparently obscure, but Alderson implies by 'self-preservation' that such use of cover would be just to protect the individual, rather than for tactical effect.³⁵ Buller castigated ineffective reconnaissance, a product of poor fieldcraft and bad prewar training. Gough admitted to learning more about reconnaissance, fieldcraft and tactical movement from patrolling with Natal farmers than from his 10 previous years service as a cavalry officer.³⁶ Lt Col May diagnosed:

Where our men did more conspicuously fail and continued to fail was in

³³ Col Henderson *The Science of War* (1905), pp 350-1. Henderson used the quote to link Tirah and South Africa, Chapter 2; 'Précis US MA Report' *JRUSI XLV* (1901), p 895.

³⁴ *RCWSA Evidence II* pp289,663; Vincent 'Lessons' p 632.

³⁵ *Lessons from 100 Notes made in Peace and War* (Aldershot 1908), pp 7-8, 12, 67. Chapter 1 shows that fieldcraft balances risk and effectiveness.

³⁶ Vincent 'Lessons' p 632; Gen Gough *Soldiering On* (1954), pp 66-7. Though made decades later, this suggests the strength of impression. It does not reflect well on Gough, his unit, or his arm, suggesting its accuracy.

disregarding the features of the ground... It is in developing in their men the power of recognizing the opportunities for utilizing cover that the task of those who train our battalions and brigades will chiefly lie.

But improvement occurred during the war. Repington noted that facing enemy firepower: 'we extended our firing line and returned to the old and too much neglected practice of skirmishing.'³⁷ By mid-1900 an Australian commented that: '[t]he Derbys, Gordons and CIVs ...crept up from ridge to ridge, making good use of every fold in the ground.' The first two units contained many Tirah veterans. The third was a Volunteer unit whose intelligent privates were more likely to show initiative and thus employ fieldcraft correctly than drill-indoctrinated regulars. Roberts concluded that campaigning had improved soldiers' initiative and fieldcraft.³⁸

Outposts

British outposts were often poorly sited and their sentries unalert. Alderson commented that South Africa: 'teems with ... instances of [such] neglect.' Pilcher noted the defeat at Mazillikat's Nek was caused by a unit bivouacking in a hollow rather than picketing the surrounding hills.³⁹ Maj Baden-Powell recalled that: '[m]ost of the reverses we sustained... were due to neglect of some sort in providing a proper protective screen.' He insisted that troops on protective tasks must be alert and hide themselves and criticised stentorian challenges by sentries and visible movement by outposts. Gilmour was very critical of unwary sentries who caused defeat at Nooitgedacht. A veteran reported sentries marching on their beats as if at Pall Mall.⁴⁰ Corner blamed the Yeomanry surprise at Senekal on unalert outposts. Even at Ladysmith the Boer attack on Caesar's Camp was detected late and Hamilton was

³⁷ 'Suggestions from the Front' *19C XLVIII* (1900),p 715.

³⁸ F Wilkinson *Australia at the Front* (1901),p 194; *RCWSA Report* p 45; Ibid p 66 for praise of the CIV.

³⁹ Alderson *100* p 7; Ibid pp 48-59; Pilcher *Lessons* pp 20-1; WR 3.

⁴⁰ *War in Practice* (1903),p 200; Ibid pp 219-20; ed P Milham *Clearly My Duty* (East Linton 1996),p 114. This is a contemporary diary; 'War -Soldier' 'Outpost Sentries' *USM XXIV*(1901),p 180.

surprised at Wagon Hill. Clearly Colonial warfare had not taught vigilance.⁴¹

Alderson noted how modern weapons had made French modify the drillbook system of outposts in South Africa by pushing them further out than the 1800 yard norm. Baden-Powell felt that outposts might have to be pushed out to 2000 yards to protect against modern rifles, or 6 miles to counter artillery.⁴² This reflects the greater effectiveness of firepower, paralleling similar changes during Tirah. But modern weapons' greater firepower meant that outposts could be thinned-out. Baden-Powell suggested a yardstick of 100 men per mile.⁴³ Veterans later insisted on vigilance, no matter how tired troops were, and were adamant on executing sleeping sentries. This penalty was not rigorously enforced in South Africa. One can speculate that the greater severity displayed between 1914-18 was a reaction.⁴⁴

Boer vigilance was worse than British. Reitz's uncle paid a younger member of his picket to stand his watch while he slept in a feather-bed. The Boers unsurprisingly were raided twice outside Ladysmith losing several guns and night operations generally favoured the British.⁴⁵ They had been a distinctive feature of British tactics since Tel-el Kebir. They negated enemy firepower and surprised the enemy. Though night attacks failed at Magersfontein and Stormberg, they succeeded at Belmont, Paardeberg and in numerous night raids on Boer laagers during the guerrilla phase. Contemporaries deduced that night operations were an important means of defeating firepower but that training for them needed to be good. Manuals developed this point after 1902.⁴⁶

⁴¹ *Story of the 34th Company (Middlesex) Imperial Yeomanry* (1902), pp 74, 90-104; Maj Gen Maurice BROHWSA II (1907), pp 558-9, 565-6.

⁴² Chapter 2; Alderson *100* pp 13-4; Baden-Powell *War* p 206.

⁴³ Baden-Powell *War* p 209. His section on outposts totals 30 pages.

⁴⁴ *SAD* II (1901), p 24; Lt Col Pilcher *Some Lessons From the Boer War* (1903), pp 19-21, 47-8; Lt Bethell *Outpost Duties as Learnt in South Africa* (1903), pp 25-7.

⁴⁵ D Reitz *Commando* (1968), p 62, this secondary evidence is well-supported by events at Ladysmith and during the latter part of the war; Maurice BROHWSA II pp 546-9.

⁴⁶ Maj Crum *With the [MI] in South Africa* (Cambridge 1903), p 209; 'CB' 'Some Tactical Considerations Arising from Recent Events in South Africa' *JUSII* XXX (1901), p 8. *IT* 1902 pp 141-4.

Entrenchment

Boer trenches made a great impression with the most salient example at Paardeberg. There a young ASC officer commented:

Boer trenches are marvellous and a real lesson to us; *our* rotten little scooped-out affairs, a foot or so deep, in one long line, always open to enfilade, look child's play to theirs;... *at least* 4 feet deep, hollowed out in front with good headcover ... and ... are *never* (sic) in one straight line...[T]hese trenches are the talk of the whole army.⁴⁷

That a logistician was so impressed suggests the strength of the lesson. That British field-trenches were untraversed suggests that the effectiveness of enfilade fire had been underestimated. Long-range weapons made this more lethal.⁴⁸ Roberts and the Chief Engineer, who personally reported on the Boer trench designs at Paardeberg, were impressed. They were deep, narrow, thus well-protected against shrapnel, and were carefully concealed. Thuillier attributed the RA's failure to deal with Boer trenches to these factors. Also smokeless ammunition enabled defenders of trenches to remain hidden while firing. This strengthened the defensive. Thuillier's assessment reinforces Lanchester's deductions on the powerful effects of fieldcraft.⁴⁹ That commentators ranging from Roberts to subalterns praised Boer entrenchment suggests the strength of the lesson.

In contrast British positions with their raised parapets and angular, regular construction: 'advertised themselves as far as the eye can see,' violating: 'most of the rules to which the Boers owed so much of their success.' Swinton emphasised the

⁴⁷ *SKDs* (1902) p 33; *REJ XXX* (1900),p 92. Original italicised, republished *JRUSI XLIV* (1900), pp 582-4; Glossary.

⁴⁸ *REJ XXX* (1900),pp 194-5; Maj Norris 'Retrospect of the War' *REJ XXX* (1900),p 119; Swinton *Drift* p 19. For enfilade's dangers and traversing, Ibid pp 23,25. Traversing had been long used by the sappers, that it was not employed by infantry suggests poor training.

⁴⁹ Ed A Wessels *Lord Roberts and the War in South Africa* (Stroud 2000),p 59; Roberts/Lansdowne 28/02/00. The work is a collection of contemporary documents; *The Work of the Ninth Division* (1901),p 43; Glossary; Capt Thuillier *The Principles of Land Defence* (1902),pp 191-4.

importance of hiding defences, particularly from artillery and concealing spoil.⁵⁰

Rundle castigated his subordinates:

I have failed to see any intelligent use made of entrenchments by Brigadiers ... [T]hey appear to think that a few stones ... or 6 in of earth hastily scraped up at haphazard is adequate protection against modern ... fire.

His division later adopted the Boer-designed Paardeberg Trench. As late as July 1900 the REs were dissatisfied with the technical standard of other arms' defences. This suggests that their initial efforts had been dire.⁵¹

Change happened during the war. 2 West Yorkshires, serving under Buller, practised entrenchment.⁵² In Natal more digging tools were issued to infantry, implying that combat in Natal was more positional than in Roberts' command. But the protective differences between Buller's and Roberts' troops were less significant than those involving firepower and manoeuvre.

Based on wartime experience, sappers recommended concealing trenches, avoiding skylines and digging dummy trenches.⁵³ Callwell also emphasised the need to entrench in attack, commenting that with veterans:

[n]o admonitions are needed, and in the case of tried troops, very little superintendence by the officers is called for. The men are impelled by the instinct of self-preservation, and use not only their muscles, but also their wits.

This shows how combat stimulated initiative. The RA entrenched or put pieces in emplacements in South Africa. Previously this was rare in field operations, though not in siege warfare. Now gunners saw that such defences saved casualties and hid movement on gunlines. Callwell recommended camouflaging guns with foliage, an innovation for the RA.⁵⁴

⁵⁰ 'Impressions of the Boers' *HLIC* III (1901), pp 682-3; Pilcher *Lessons* p 18; Swinton *Drift* pp 19, 24-5; *Ibid* pp 33-5 describes how the ideal position was hidden; *Ibid* p19 point 9; p 25 point 18.

⁵¹ Callwell *Tactics* *Ibid* pp 139-142; *RCWSA Evidence* II Qs 17888, 17902; WO 108/295 p 1.

⁵² Ed N Riall *Boer War* (2000), p 32. This is a contemporary diary.

⁵³ Col Wood 'The Work of the Engineers in Natal' in Capt Edwards *PPCREs* XXVII (1901), pp 62-3.

⁵⁴ Callwell *Tactics* pp 139, 147-8.

Defence

1899-1902 was the first recent war in which British forces had had to defend for long periods against modern weapons. British performance in defence was variable, though rarely tested by Boer assaults. At Kimberley and Mafeking they constructed defences effectively. Maj Gen Knox, a veteran of the Russo-Turkish War, fortified his sector of Ladysmith heavily and visibly. Contrastingly Ian Hamilton adopted a system of small, detached posts on the forward slope with his main force on the reverse slope of Caesar's Camp. The forward posts were not mutually supporting and were not sited for all-round defence. They proved vulnerable during the Boer assault on 6 January 1900 to attacks from behind. Hamilton's system of siting his main defences on the reverse slope may have been tactically correct to counter heavy firepower. But Boer artillery was ineffective at Ladysmith. Nor did White, the GOC Ladysmith, appear to have been understood Hamilton's plan. White ordered costly immediate counter-attacks, rather than attacking at night, when casualties would have probably been less.⁵⁵ There is a tension between the generally good state of the defences in the besieged garrisons and poor field entrenchments outlined above. The answer is that the sappers generally planned and oversaw the former, whilst the latter were largely dug by infantry.

Some argued that Ladysmith should have been fortified prewar.⁵⁶ This failure suggests British over-confidence in 1899. White also miscalculated Ladysmith's garrison, which was far stronger in relation to the perimeter than either at Kimberley or Mafeking.⁵⁷ A correct estimate would have allowed White to hold an extended area. This would have complicated the siege by forcing the Boers to hold a longer perimeter. Due to Ladysmith's closeness to the Tugela, the eventual front line between Buller's force and the besieging Boers, this would have deprived the Boers of defensive depth,

⁵⁵ *RCWSA Evidence II* (1903), p 560; *Ibid* pp 424,431 HedPs 'Box 1 Letter Headlam/Stapleton,' Amery *THWSA III* p 179; Maurice *BROHWSA II* pp 558-60.

⁵⁶ Glossary; 'War Despatches' *BWM* 169(1901), p 408.

⁵⁷ *Stuart Pictures* pp 216,219; *RCWSA Evidence II Q* 19963, p 424; Table 41.

thus aiding Buller. It would have also have meant that more land was available for grazing thus improving the garrison's supplies. Alternatively White could have released his cavalry from Ladysmith, giving Buller more options. Failure to appreciate the increased effectiveness of firepower recurred at Spion Kop where 4500 troops were crowded into an area barely sufficient for 500.⁵⁸

Another protective error was that the British failed to demolish the railway lines from the Boer Republics to Ladysmith. This omission may well have made the siege of Ladysmith logistically feasible. Thus a simple tactical failure dislocated British strategy. It also shows British overconfidence and poor staffwork. White later argued that the Boers' mobility was horse-based and therefore demolitions would have been ineffective, but the railways were logistically vital to the Boers.⁵⁹

South Africa was the first war in which the British used barbed wire extensively. At Kimberley they wired nearly the entire perimeter and wire was widely used at Mafeking. Later a sapper defending a minor Transvaal town laid over 60 miles of it. His defences also included abbatis, minefields, fougasses, barricades, fortified houses and redoubts.⁶⁰

South Africa showed the value of non-linear defences. Baden-Powell's defences at Mafeking were based on a series of mutually supporting but separate posts sited for all-round defence with overhead cover against shrapnel. Such positions required smaller garrisons than continuous trenches. The REs developed the concept of non-linear defences later in the war. Then it was vital to hold many positions yet manpower had to be economised to free troops for mobile operations. Firepower, obstacles and defences were substituted for men, while lower troop-densities meant that the reduced garrisons

⁵⁸ Amery *THWSA* III pp 297-8; *RCWSA Evidence* II Qs 15136-8, Buller felt that White could have released them; Ibid Q 21889; Maj Gen Maurice *BROHWSA* II (1907), pp 383,385,389,393. Both Warren and Coke contributed to the overcrowding. Lyttelton appreciated this and attempted to outflank.

⁵⁹ 'The War Despatches' *BWM* 169 (1901), p 407; *RCWSA Evidence* II p 151 contains White's defence.

⁶⁰ Capt Edwards *PPCREs* XXVI (Chatham 1901), p 73; Maj Turton 'The Defence of Christiana' *REJ* XXXI (1901), p 126.

were less vulnerable to artillery and there was less need for resupply.⁶¹ Reducing the logistic bill and hence the need for convoy guards freed yet more troops for offensive action, while there was less risk of stores being captured. In the guerrilla phase the Boers largely survived on captured supplies.

The Engineers 1899-1902

South Africa demonstrated that the sappers were vital in modern war. The war initially demanded the construction of defences and later the erection of thousands of miles of blockhouse lines and barbed wire.⁶² During the British offensive manoeuvre demanded a range of engineer tasks ranging from the improvement of drifts to building bridges. Growing technological complexity also increased their importance. Sappers had to operate WT, traction engines, cars, balloons and searchlights, as well as surveying, photographing and minelaying. The logistic construction tasks necessary in an undeveloped country were vast. Engineers constructed miles of railway, hospitals capable of accommodating 26,000 men, 210,000 square feet of covered storage and barracks for 16,000 troops.⁶³ Most sapper tasks were logistical in nature, rather than combat engineering. By mid-1900 the RE strength in South Africa exceeded 5000, excluding local forces.

The REs analysed the war's lessons carefully.⁶⁴ CREs commented that field companies must carry more digging tools, suggesting that entrenchment would be more important in future. They stressed engineer mobility.⁶⁵ Improving routes was essential for mobility, but marching sappers moved too slowly to start work sufficiently far ahead of the main body of troops. Furthermore that sappers marched meant that they were

⁶¹ *RCWSA Evidence* II p 424; WO 108/295 p 1; *Map 1*. The defences gave all-round defence and were later adapted to defending towns and areas, Amery *THWSA* VI p 336.

⁶² Capt Grant *BROHWSA* IV (1910), Appendix 2, they provided a fixed line of stops to assist the drives.

⁶³ WO 108/299 pp 48-50; WO 108/295; Col Watson *History of the Corps of [REs]* III (Chatham 1915), p 111; Amery *THWSA* VI pp 334-5.

⁶⁴ WO 108/282-97, these files form a sapper history of South Africa; Lt Col Girouard *History of the Railways during the War in South Africa, 1899-1902* (1903). WO 108/376, the telegraph history, WO 108/246, WO 108/248.

⁶⁵ WO 108/246 CRE 7 Div pp 14-5; CRE 9 Div p 19; OC Fd Park p 24; *Ibid* p 17.

tired before beginning hard work. Maj Hunter-Weston stressed that at least one RE troop per cavalry brigade was needed. Hitherto there had been one troop for the whole Division. Digging tools and explosives must be packborne, consequently with greater cross-country mobility, while the Cavalry Division required a CRE for coordination. Hunter-Weston noted that even cavalry had entrenched. This suggests that greater firepower had increased the importance of dismounted tactics.⁶⁶ General Wood, the Chief Engineer, stressed that the infantry divisional CRE's position was unsatisfactory; he should be on the divisional staff to ensure: 'the fullest and quickest direction of the Engineer Arm.' This also would have also increased inter-arm cooperation. He made the same point to the RCWSA, recommending more mounted sappers, pontoons, telegraphists and signals material.

The general consensus was that South Africa had increased the REs' importance and that sappers must therefore be more integrated into tactics. This recognises the importance of both protection and mobility, and that warfare was becoming more technical.⁶⁷ It was not an entirely new lesson as Hilyard's Committee had made similar points.

Technology 1899-1902

New equipments were generally assigned to the REs so technology is covered here. The Army Board showed no reluctance to use technology in South Africa; indeed flying machines were the only significant device declined. As they had not yet been invented, the Board's refusal may be attributed to prudence and not innate technophobia. Langley's aircraft, commissioned for the Spanish-American War, did not fly until 1903 with less than satisfactory results.⁶⁸ The Board saw merit in armoured cars but referred them to the RE Committee. Dipping needles to detect buried Boer

⁶⁶ Ibid pp 7-8, 24-5; Ibid p 72; French saw a CRE as essential in a cavalry division; Watson *REs* III p 43.

⁶⁷ WO 108/246 pp 8-9 CE Appendix 1A.; Glossary; *RCWSA Evidence* I Qs 2221-4; WO 32/6805 p 5.

⁶⁸ WO 108/307 p 117; *The Times Two* 16/12/03, p 7.

guns, WT, cars, armoured traction engines, extensive use of telephones, all featured in South Africa.⁶⁹ Baden-Powell flew photo-reconnaissance kites, while balloons were used to control artillery and locate hidden weapons. A searchlight section deployed in early 1900, and numbers increased from a few commandeered lights in 1899 to some 250 in 1902. This reflects the importance of night operations.

In South Africa distances and dispersion demanded efficient signals as in Tirah. For the first time in 1899 the RE Telegraph Division laid telephone lines to outposts.⁷⁰ The prime issue in South Africa, however, was not technological but organisational. More signallers were needed, especially by field artillery which had abolished them in 1899. More signalling equipment was vital and more signallers had to be mounted as they could not otherwise keep up with mounted HQs. In the besieged garrisons comprehensive communication systems were established which allowed their commanders to control from central positions. White attributed the repulse of the Boer attack in January 1900 to the telephone system which enabled him to coordinate the defence. French, outside Colesberg, commanded across a 33 mile front by field-telegraph and heliograph. Telephones were used on the battlefield; French telephoned for reinforcements before Elandslaagte.⁷¹

The Army laid 9361 miles of telegraph-wire along blockhouse lines and installed nearly 2000 telephones, over 50 exchanges and 18,236 miles of line. The Army hired a WT contingent from Marconi's, supplementing this with sets seized from the Boers. Several wireless trials were conducted and the Ladysmith garrison improvised a WT set.⁷² Professor Travers has argued that the Army had an anti-technology bias before 1914; this does not appear to be the case between 1899-1902.

⁶⁹ WO 108/307 pp 122,134.

⁷⁰ *HBM* III (1900),pp 180-1; WO 108/290 p 5; WO 108/298 pp 29-30; WO 108/376 p 4.

⁷¹ WO 108/376 pp 23-4 & Diagramme 7; *THWSA* III (1905),p 152; Maj Churcher *With the Irish Fusiliers from Alexandria to Natal* (nd), pp 39,45; WO 108/376 pp 23,6.

⁷² WO 108/376 pp 49-50,54; WO 108/307 pp 68,71; *Official Records of the Guards' Brigade in South Africa* (1904),p 79. WO 108/376 p 24.

Improving Protection

Defence

Defensive tactics changed after 1902, when, due to greater firepower, defensive norms were cut from 10,000 to 5000 men per mile. This contained a margin for counter-attacks. When these were not envisaged, norms could be further reduced to 3000. Thinning-out defenders made enemy shelling less lethal as the defenders were less concentrated, while ground could be better used. Thuillier, citing Callwell, estimated that these norms could be reduced even lower.⁷³ This meant that the same number of troops could hold longer frontages. Consequently outflanking movements, made more necessary by increased firepower, had to be pushed even wider, further complicating manoeuvre. These post-1902 defensive norms were greater than those used in South Africa; however contemporaries felt that European armies were more likely to assault than the Boers. Hence positions had to be held more strongly. Thinning-out also meant that initiative was delegated. Many argued that thinning-out also aided offensive action; more troops could be freed for attacks, rather than being tied down holding the attacker's own defences.

Contemporaries felt that: 'new weapons have greatly increased the tactical strength of the defensive side.' *CTrg 1902* acknowledged:

entrenchments... are the special prerogative of the defence, and by their aid a position could be rendered practically impregnable.

However, heavily entrenched positions could be outmanoeuvred, a reason advanced for developing mobility, or attacked by night.⁷⁴

Smokeless ammunition meant that defensive tactics now emphasised concealing positions. *CTrg 1902* saw that well-hidden defenders were able to surprise rash

⁷³ Maj Edwards *The Defence and Defensive Positions* (1902), pp 369-70; *The Principles of Land Defence* (1902), pp 308-9. These norms allowed for considerable depth.

⁷⁴ Thuillier *Principles* p195; Lt Col James *Modern Strategy* (Edinburgh 1903), pp 140-1; *CTrg 1902* p 16. Chapter 5.

attackers. *IDB 1896* had not mentioned this point. *CTrg 1902* suggested that gaps between positions were acceptable if they were covered by fire. This was a South African lesson. Defensive artillery tactics put far greater stress on avoiding artillery duels from 1902. Also *FAT 1902* emphasised:

In all military operations, concealment of plans and dispositions is all important... Firing from behind cover and from concealed positions should be resorted to whenever practicable and no guns or emplacements may be placed on the skyline where they are easily located. Gunpits... must be provided.

FAD 1896 had not contained these points, while *MME 1899* had remarked that:

‘[a]rtificial cover for artillery will be very rarely, if ever, used [in field operations].’⁷⁵

The new manuals gave more space to defence than did *IDB 1896*’s Part V. But like *IDB*, *CTrg 1902* stressed counter-attacks.

Entrenchment

Montgomery-Massingberd argued in a staff college paper that South Africa had taught the Army the value of entrenchments.⁷⁶ His DS did not criticise this and, judging by the weaknesses outlined above, his argument has force. The postwar manuals emphasised digging. Improved spades were introduced in 1900 and the number of digging-tools in battalions doubled. Trench-designs altered to become deeper, narrower and traversed against enfilade fire.⁷⁷ The manuals advised digging during attacks. This did not mean sapping attacks, although Buller had envisaged these on the Tugela, but the immediate consolidation of captured positions to provide firm bases for further advances.

MME 1901 emphasised concealing trenches and recommended that communication trenches were dug in the field. Hitherto they had been only used in

⁷⁵ *FAT 1902* p 15; *MME 1899* p 50; Chapter 4. Entrenchment was always important in sieges.

⁷⁶ MMPs 2/4 ‘Paper on Field Entrenchments’ p 1. He probably meant by arms other than the sappers who were well aware of its value.

⁷⁷ *MME (Provisional)(1903)*, p 9 totals 684: *MME (Provisional) 1901* is 404. *(Provisional)MME 1899* p 3 328; *IME Part I Field Defences* (1902),p 15; *(Provisional) MME 1899*, pp 47-9; *ME I* (1902), Plates XIIa & XIII; Glossary.

sieges.⁷⁸ Surprisingly, after a war which saw massive use of barbed wire, *MME 1903* did not cover it in more depth.⁷⁹ But *Field Defences* saw wire as the: ‘best of obstacles,’ noting its speed of construction, the difficulty of destroying it and that it did not block observation or fire. These points had not appeared in the prewar edition. They suggest South Africa’s influence.⁸⁰

Fieldcraft

As postwar norms for manning defences reduced, those for extension while moving increased. In 1899 infantrymen moving were as close as a yard apart; in 1902 they extended up to 30. Both changes demanded more low-level initiative, both facilitated fieldcraft, allowed the better use of ground and enhanced protection. *IDB 1896*’s section on extended-order drill was rigid and put little emphasis on fieldcraft.

Contrastingly *IT 1902* explained why fieldcraft was important:

Troops are formed as skirmishers for the following reasons:- That they may not present a favourable target... That they may escape observation when reconnoitring; and enable them to take advantage of cover.

It stressed that the: ‘paramount importance of concealment must be impressed on all ranks,’ warning that poor individual fieldcraft could betray collective movement. This partly confirms the point made at the start of the Chapter that protection is more affected by individuals than firepower or mobility. *IT 1902* saw extension between soldiers as ranging from 5-15 paces and possibly more. It stressed careful individual instruction in the use of ground both as cover for movement and as fire positions. It ordered, unlike *IDB 1896*, that soldiers were to be practically trained in crossing ground with individuals selecting their own cover. Unlike *IDB 1896* soldiers were allowed to deviate from the line of advance to use ground. *IT 1902* emphasised that commanders should not expose themselves unnecessarily and that they were to use cover.⁸¹ *IDB*

⁷⁸ *MME (Provisional Edition) 1901*, pp 50-50A. Communication trenches were common in siegewartfare.

⁷⁹ *MME 1903* has an additional illustration of barbed wire, Plate XXII.

⁸⁰ *IME 1 Field Defences* (1902), p 80 contrasts with *MME 1899* pp 56-7 and *IME Part I* (1894), pp 68-9.

⁸¹ *IT 1902* p 142; *Ibid* pp 135, 144, 147, 149.

1896 had forbidden using the prone position within 500 yards of the enemy, presumably to maintain control. *IT 1902* ordered: 'skirmishers will invariably ...lie down.'⁸²

IT 1902's S154 forms the basis of the Army's fieldcraft instruction. It recommended avoiding bunching and exposure on skylines, stressed selection of ground, firing round rather than over cover and careful individual fieldcraft training. Even before *IT 1902* was published, training at Hythe had started to change.

During the past year [1901] certain practices have been introduced framed with a view to teaching individuals to utilise ... ground for cover ... These practices take the form of individual instruction in skirmishing... The result has been very satisfactory. Such practices have been introduced in the revised ... Musketry Regulations.⁸³

That Hythe held trials before changing *MRs* suggests a more logical method of tactical innovation. Hythe's methods were also introduced in India. The 1901-2 Indian Musketry Circular recommended that the individual soldier received training in:

how to get over [ground] without exposing himself, how to utilize cover, to get into a position to fire... Widely extended formations have increased the necessity for independent action on the part of the soldier and he cannot always depend on having someone at hand to tell him where to go and what to do.⁸⁴

It noted that using cover was now being taught but British troops' progress was poor.

MRs (Provisional) 1903 included using fieldcraft in rangework. They stressed cover, entrenchment, adapting formations to circumstances and that: '[i]nvisibility (sic) has acquired an importance second only to fire effect.' They forbade close formations when troops were in sight of their targets. *MRs 1898* did not mention fieldcraft and gave no instructions on tactics or initiative. They had no mandatory practices involving the use of cover. Nine of *MRs 1903*'s practices included fieldcraft.⁸⁵ The musketry schools and the musketry staff, who existed in all major commands, had real potential to improve fieldcraft army-wide by enforcing these regulations.

⁸² Ibid p 141.

⁸³ *Musketry Report 1902* (1903),p 5.

⁸⁴ L/MIL/7/2462 '1901-2 Indian Musketry Circular' p 1.

⁸⁵ *MRs 1898* had an attack practice, but there was no certainty that cover was used; Tables 17, 18.

The other arms gave more attention to fieldcraft in training. Parsons stressed more attention to the: '[p]rocedure of occupying [gun] positions unseen' and to the: [u]se of ground to conceal movement.' *CT 1904* emphasised dismounted skirmishing, fieldcraft and using cover. This suggests that both the Cavalry's tactics and culture were altering.⁸⁶

Outposts

CTrg 1902 stressed the concealment of outposts and was far more emphatic on the need for fieldcraft by individual sentries than *IDB 1896*:

To see without being seen is the first maxim of outpost duty... The more an enemy is kept in ignorance of the strength and position of the outpost troops, the greater will be his uncertainty... All troops on outpost must be carefully concealed.⁸⁷

CTrg 1902 saw that the best position for sentries at night was in lower ground so that enemies crossing a crestline were skylined.⁸⁸ It was a South African lesson. *IT 1902*'s treatment of outposts differed from *IDB 1896*:

If an enemy is so continuously watched that he can make no movement without being observed, surprise is manifestly impossible. The first duty ... of the outposts is RECONNAISSANCE (sic).⁸⁹

This demanded more active conduct of outposts with emphasis on patrolling and scouting rather than *IDB 1896*'s static posts. This also links in with the greater stress on mobile reconnaissance. The change also required more low-level initiative.

South Africa like Tirah emphasised many practical points on concealment, camouflage, including adding foliage to helmets, avoidance of skylines and vigilance.⁹⁰

General Protection

CTrg 1902 devoted a chapter to protection. It covered this topic in more depth

⁸⁶ *ARSG 1901* (1902), pp 15,17; *CT 1904* pp 54-6.

⁸⁷ *MRs (Provisional) 1903* p 47; Table 18; *Ibid* pp 24-26; *CT 1904* pp 53-56, *CTrg 1902* p 108.

⁸⁸ *CTrg 1902* pp 109,126-127, *IDB 1896* p 193 placed them on the forward slope.

⁸⁹ *CTrg 1902* p 107.

⁹⁰ *IT 1902* and *IDB 1896*, pp 43-4 &80 respectively; Lt Tulloch 'Some Notes on Outpost Duty in South Africa' *JRUSI XLVIII* (1903), p 1161.

than *IDB 1896*'s Part VI. The latter, outlining protection, was curiously not included in *IDB*'s section on 'Combined Tactics,' though this part was apparently intended for all arms.⁹¹ 30% of *CTrg 1902* was on protection; attack accounted for 12% and defence 10%.⁹² The work emphasised protection's importance in advances, withdrawals and in positional fighting. It laid down general protective principles. It is not possible to compare *CTrg 1902* and *IDB 1896*'s treatment of protection quantitatively as the two works are pitched at different levels, but the former's stress on protection suggests South Africa's influence.

The Engineers and Technology

South Africa was the first major war in which the CinC, Kitchener, was an ex-sapper. Other engineers rose to prominence there. Like the RA, South Africa caused a substantial increase in the REs; afterwards some 65 officers and 1970 sappers were added. They were organised in a variety of units ranging from railway companies to balloon sections. The REs were becoming seen as the fourth combat arm. More sappers attended Camberley after 1902, and more, as Wood's Committee had recommended, were selected to command formations.⁹³ As Table 30 suggests British infantry divisions had more sappers than French and German formations.

There was no reluctance to advance technology after 1902. Searchlight sub units were established. Field telephones were introduced and later field WT, after experiments beginning in 1903. The Army introduced a comprehensive signals organisation after extensive trials. Here the British were ahead of other European armies, with significant results in 1914. Chapters 4 and 5 cover technical developments in firepower and transport respectively. The Service press became interested in aircraft

⁹¹ *CTrg 1902* Part V pp 94-140. This can be deduced as *IDB 1896*'s instructions are not limited to Infantry, eg p 163.

⁹² *CT 1902* attack pp 19-36, defence pp 36-50.

⁹³ Brig Gen Baker-Brown *History of the Corps of [REs] IV* (Chatham 1952), pp 18, 51, 54; this was not a smooth process from 1902, the 1904 Esher reforms impaired the REs' position for a time.

relatively early. By 1914 5% of the Army's budget was spent on the RFC and the British had a higher ratio of aircraft to formations than either France or Germany. Similarly Britain had more MT. Britain deployed considerable scientific effort to improve aircraft. The Army used aircraft more effectively in 1914 than the Germans who relied more on cavalry reconnaissance and failed to detect the BEF in consequence.⁹⁴ This was despite the fact that the BEF, the westernmost army on the Allied front was located where reconnaissance was imperative for the Germans. This system was based on extensive trials, principally on the 1912 Army Manoeuvres, to develop air-reconnaissance and its associated C3.⁹⁵ A thesis devoted to tactics cannot pursue the question of technology far but in summary British weapons and military technology was not inferior to that of other armies in 1914. There were differences but these can largely be accounted for by the differing roles of the armies.⁹⁶

Conclusions

The growth of firepower and the introduction of smokeless ammunition emphasised protection more, enforced greater use of ground and cover, made camouflage worthwhile and enforced extension. In turn dispersion demanded greater low-level initiative. Similarly norms for attack and defence altered. These changes involving wider extension improved protection. Many of these features were first seen in Tirah.

The Army paid greater attention to defence after 1899. Defence was still seen as subordinate to attack but *CTrg 1902* summed up their relative advantages and disadvantages well. The general view was that greater firepower, entrenchment and

⁹⁴ Table 46 ; D Edgerton *England and the Aeroplane* (Basingstoke 1991), p 10. He emphasises that the scale of theoretical physics and engineering was substantial. *Report of the Advisory Committee for Aeronautics for the Year 1909-10* (1910) shows 7 FRSs involved in the research; Brig Gen Edmonds *MOFB 1914 I* (1937), pp 59-60.

⁹⁵ ED Brose *The Kaiser's Army* (Oxford 2001), p 203; WO 33/620; *Statement on the Army Estimates 1914-15* (1914)

⁹⁶ Notably in the German emphasis on medium howitzers, but the Germans faced breaking through defences. This conclusion parallels recent scholarship on the RN, see J Brooks *Dreadnought Gunnery and the Battle of Jutland* (Abingdon 2005), p xii.

smokeless ammunition favoured defence. The manuals stressed that defence should be active. This was not new but South Africa had shown the dangers of passive defence. Commentators generally felt that the gain in defensive power was not totally inimical to attack. Now an attacking force could economise on the troops required to hold its own defences, thus freeing more for manoeuvre. Mobile troops who had manoeuvred to seize a position could retain it more easily due to their increased firepower. The Army's defensive tactics altered as a result of South Africa; afterwards firepower rather than thousands of infantry per mile was seen as the requirement. The postwar manuals saw that continuous lines were unnecessary; gaps covered by fire were acceptable.

Far more attention was paid to fieldcraft, the use of cover and concealment, avoiding skylines and entrenching both infantry and artillery after 1899. Trench designs improved, and the scale and effectiveness of digging equipment increased. As Roberts pointed out to the RCWSA, delegating initiative improved individual performance in entrenchment, outposts and fieldcraft. South Africa saw the most extensive engineer commitment since the formation of the Corps. The engineers were becoming accepted as the fourth combat arm.

The Army exploited technology in South Africa; the most significant innovations were MT, the emergence of QF technology and the extensive use of telephony, telegraphy and the pioneering use of WT. The new emphasis on signals reflected weapons' lengthening ranges. This had also featured in Tirah.

Protection, when implemented, occurs at lower tactical levels than firepower or mobility and demands low-level initiative. Thus the emphasis on protection and its component, fieldcraft, from 1899, suggests that the culture of top-down control was changing due to the effectiveness of modern weapons.

Chapter 7 Initiative, Discipline, Education and Training

For e' might have gone and sprayed 'em with a pom pom,
Or e' might 'av slung a squadron out to see,
But 'e wasn't taking chances in them 'igh and 'ostile krantzes-
He was markin' time to earn a KCB,
(Panicky, perishin' old men),
That 'amper an 'inder and scold men,
For fear o' Stellenbosh!

Introduction

Definition

Verse rarely tackles military problems, so that Kipling wrote on defective initiative in South Africa suggests how serious the fault was. He also diagnoses that severity inhibits risk-taking with adverse tactical results. Clearly the British were tactically centralised in 1899 despite the lessons learned during Tirah. This Chapter demonstrates firstly that from 1899 the Army attached great importance to inculcating initiative. Firepower had caused battlefields to become extended and complex. On these coherent combat with commanders exercising close control proved impossible. Instead fighting had developed into interrelated skirmishes which demanded individual initiative.¹ Secondly it shows that inculcating initiative required substantial changes to training, education, discipline and administration. All altered either to enhance initiative directly or, if not expressly so intended, the changes would have been beneficial. That so many measures were used to inculcate initiative suggests the change's importance.

Here a definition of initiative is appropriate. There are two military meanings: the first is the ability to dictate combat's pattern and pace. This is generally connected with the attack, and the related factors of surprise and tempo which have always proved formidable military advantages.² This Chapter considers initiative's second meaning, the ability of subordinates to act, either without orders or when these have become

¹ There were confused battles previously, eg Inkerman. But commanders could control tactically in the musket era, eg Wellington at Waterloo. By 1900 this had become impossible. Though Symons, Buller and Methuen were not personally equal to Wellington, their failures at Modder and Colenso were primarily systemic caused by enhanced firepower. All three went too far forward and became casualties.

² *BDD* (1996), p 4-9.

inappropriate, to further the overall aim.³ This qualification emphasises that reckless action, however independent, is often disadvantageous. Thorneycroft's abandonment of Spion Kop showed independence but did not further Buller's plan.⁴ Those exercising initiative must therefore show judgement. This has further implications, demanding the development of doctrine, principles which guide decision-making without being unduly prescriptive.

The two meanings of initiative are connected; surprise and tempo, needed if the initiative is to be won, are impossible if requests for decisions have to be laboriously passed up the chain of command and orders then transmitted downward. Manoeuvre depends on gaining the initiative and consequently demands timely decision-making. This Chapter concentrates upon the second definition, but juniors displaying initiative are more likely to increase tempo than the inert, thus aiding manoeuvre and gaining the initiative in the first sense.

Initiative and Firepower

One of the Army's most significant changes, which occurred during the magazine rifle era, was largely invisible, both to contemporaries then and to historians now, but nonetheless was critical. Essentially it switched from centralised to delegated tactics allowing subordinates initiative. The new weapons forced dispersion and compelled the use of ground as cover against fire. Commanders now were more vulnerable to longer-ranging, more accurate fire, while smokeless ammunition meant that no longer could a company, let alone a CinC, gauge the enemy at a glance. His own troops, dispersed, hugging the earth, were hard enough to find, let alone command. Tactical communications were weak so juniors had to be allowed initiative. Wellington had allowed little freedom to his senior commanders; in the magazine rifle era sergeants,

³ Lt Col Maurice 'The Use and Abuse of the Initiative' *AR VII* (1914), pp 1-2.

⁴ LS Amery *THWSA III* (1905), pp 289-90.

soldiers even, had to exercise more initiative than the Duke's officers.⁵ It was a profound alteration and far from being limited to tactics. The Army's culture of top-down control had to alter with deep implications for discipline, education and training.

Initiative, Society and Culture

Military initiative has a cultural component influenced by society-wide forces as well as more narrowly military factors. In Russia, autocratic control combined with a military culture, extending back to Suvorov, of mass and shock, exacerbated by poor education, curbed initiative. British officers from the Crimea to Manchuria criticised the resulting Russian inertia.⁶ How far wider trends in Britain, the growth of education being but one, influenced initiative from 1897 is hard to say. There clearly was an effect but contemporaries hardly acknowledged it.

In an Army, with Infantry and Cavalry regimentally based, unit cultures were significant, variable and resilient, ranging from the Gordons' sturdy independence, disdain for staff and Staff College and strict drill tradition, to LI's delegation and initiative.⁷ A veteran LI CO commented of them:

Such were the principles instilled into me when I joined the 43rd as a boy of eighteen. Such are the principles that I have tried to carry out all my life. Such are the principles that made Napier ... describe the 52nd as "A Regiment never surpassed."⁸

LI's role in dispersed combat had developed initiative, internal discipline and leadership in the late 18th and early 19th Centuries. Now modern weapons were making these qualities necessary for all infantry. The LI revival did not cease in 1899 and many recognised the importance of LI principles in instilling initiative. Some non-LI officers

⁵ 'Regimental Officer' 'Musketry and Discipline' *USM* XXIII (1901), pp 367-8; Col Marshall *Men against Fire* (NY 1947), p 129. Marshall's methodology has been highly criticised, but few combatants would dispute his conclusion; J Keegan *The Mask of Command* (1987), p 132 *passim*.

⁶ Col Mercer *Give Them a Volley and Charge* (1998), p 7; Chapter 8.

⁷ Gen Hamilton *Listening for the Drums* (1944), pp 69-71. But their culture was changing by 1899; Lt Col Maurice 'The Use and Abuse of the Initiative' *AR* VII (1914), p 5.

⁸ Lt Col Clark 'The Maintenance of Discipline' *OXL* III (1894), p 212.

consciously used LI methods in training after 1902.⁹

Initiative was not uniform across the combat arms due to their differing tactical requirements. Infantry, less LI, had traditionally fought in close order under tight control, with, as Callwell recalled, adverse results:

a field gunner brought into close relation with any infantry battalion at the time [the late 1880s] could hardly fail to disapprove of the general principle governing its internal economy [C]entralisation was the key-note of the system, with adjutant for focus, and senior captains ... seemed to have less authority... than I had enjoyed ever since ... first joining a battery.

This is secondary evidence, yet a general's reflection after a lifetime's service has value.¹⁰ Cavalry nominally had the Squadron System which should have fostered initiative, but its implementation was patchy.¹¹ But cavalry, massed for shock action, were necessarily under close control, and it was precisely in tactically decentralised duties that they were to fail in 1899-1902.¹² Field artillery was decentralised but this was reducing; longer-ranged weapons, the resulting ability to concentrate and the need to coordinate fire meant that batteries were becoming permanently organised into units. Qualification is necessary, however. Batteries were allowed considerable freedom, and in manoeuvre centralised control of artillery was hard. Thus it would be hard to argue that field gunners needed more or displayed less initiative after 1899. Some, however, feared that centralisation would inhibit it.¹³ Infantry and Cavalry were to be most affected by the need for increased initiative after 1902, though the RA also inculcated it.

Initiative, Discipline, Education and Training

This section examines the complex interrelationship between the above factors.

Fuller noted that tactical changes altered discipline and FM Wavell explored the

⁹ Chapter 2; Gen Haldane *A Soldier's Saga* (Edinburgh 1948), p 270. Haldane was non-LI, and, though his comment was made decades later, it is corroborated by his *Notes on Training* written pre-1914.

¹⁰ *Stray Recollections I* (1923), p 294. Brig Bidwell *Gunners at War* (1970), p 58 corroborates Callwell.

¹¹ Glossary; HA Gwynne *The Army on Itself* (1904), p 69. HowPs 8/4/1 Letter 16/12/13.

¹² 'Cavalry Organisation' *BA LXXXI* (1908), p 490 blamed poor initiative for these tactics failings.

¹³ WO 163/11 'IGF Report 1905' pp 178-9; Bidwell *Gunners* pp 42-3; Maj Williams-Wynn 'The Brigade System in the RFA' *PRAI XXXII* (1905), p 18.

relationship, viewing discipline as: ‘simply... “the soldierly spirit.”’ He continued:

the discipline... now required ... is not so much unquestioning obedience as that, when two or three are gathered together, there shall be courage and enterprise. And to my mind this ... derives more from the ... education hut ... than ... the barrack square...Forty years ago our battles could still be won on the barrack square as was shown at Omdurman. But it is certain that barrack-square methods can no longer win battles as the Boer War ... taught us... [T]raining... should be directed to develop ... individual responsibility and initiative of the soldier ... [E]ducation ... rather than drilling ... is the foundation of discipline.¹⁴

Wavell states that a relationship exists between dispersed tactics, initiative, education and ‘internal’ discipline. Wavell, a South African veteran, had served throughout the change, thus giving him perspective, and he has a reputation as a thinking soldier; his views have therefore validity.

This thesis maintains Wavell’s argument that the above relationship exists.

Profound change in one factor will affect the others to varying extents. Tirah and South Africa saw major tactical change ie greater firepower which forced dispersion, thus initiative had to increase. To accommodate this discipline needed to become more ‘internal’ as soldiers were not under close control. They had to be better educated, far more had to use maps. As is shown later, training altered to cater for greater tactical complexity.

Initiative and Discipline

Dispersed combat demands intelligence and ‘internal’ ie self-discipline, based upon patriotism, comradeship, and regimental pride, fostered by leadership rather than top-down control enforced by ‘imposed’ discipline.¹⁵ In the Frederickian era discipline was external and ruthless: ‘[i]f a soldier ... looks about to fly, or so much as sets foot outside the line, the [NCO] standing behind him will run him through.’¹⁶ In close-order

¹⁴ Col Fuller *Sir John Moore's System of Training* (1924),p ix; FM Wavell *The Good Soldier* (1948),pp 99-100.

¹⁵ Brig McPherson *Discipline* (1950),pp 1-3. *ADP 2 Command* (1995),p 2-23 for discipline’s effects on initiative.

¹⁶ Gen Hackett *The Profession of Arms* (1983),p 123, citing Frederick the Great.

combat geometry made such enforcement possible; furthermore soldiers had to take few decisions, even officers in line infantry or massed cavalry required little initiative. In Tirah's nullahs, on the veldt, in dispersed combat generally, spatial changes made external discipline unenforceable.¹⁷ Nor were superiors at hand to give close tactical direction. Admittedly the British Army was not mercenary as Frederick's largely was, while Georgian benevolence had matured into Victorian paternalism. But despite these society-wide influences, taut 'external' discipline had survived in many units:

the paramount importance of the very strictest attention... to ... drill and the minutiae of interior economy...[I]t is in the closest adherence to routine, to rules and to orders definitely laid down that we must base the foundation of true discipline.¹⁸

In consequence: '[t]he corporal will not do anything for fear of the sergeant ... the sergeant will not move for fear of the Captain.' Switching to 'internal' discipline, essential for dispersed combat, demanded profound Army-wide changes. Neglecting to implement these had dire results in 1899:

[a]ll initiative in the soldier was sternly repressed. Independent firing was not encouraged, because it was argued, the private, being "stupid" and improvident, would hurriedly fire off all his ammunition. The clip loader... was rejected for the same reason. "Crisp" volleys (which in war hit nothing) were preferred; ...at Nicholson's Nek-this meant losing.¹⁹

Professor French notes improvements in discipline after 1893. It is true that there were fewer reported offences, although the decline accelerated far more later during the period this thesis cover. But despite this improvement, the method of imposing discipline remained 'external' before 1899. This is suggested by the poor performance of detached duties in both Tirah and South Africa, tight administrative centralisation,

¹⁷ J Keegan *The Face of Battle* (1976), pp 182-3; *RCWSA Report* pp 57-8.

¹⁸ Lt Col Hutton *Five Lectures on [MI]* (1891), p 6. That Hutton was an LI officer who respected his regiment's ethos suggests how dominant control was.

¹⁹ *RCWSA Evidence II* p 260; 'Efficiency in the Services' *QR* 196 (1902), p 279.

stress on control in the manuals and the still high rate of disciplinary offences.²⁰

Initiative and Tactics pre-1897

Chapter 2 has analysed British tactics in 1897, this section examines their relation to initiative. Broadly close-order and control had remained effective against inferior enemies.²¹ Consequently:

[a] slavish obedience was enjoined upon the officer, ... he was taught to regard it as almost a crime to think ... Whatever he did, his superior stood over him; divisional generals meddling with the internal management of brigades, colonels with companies and so on.... A vast manual of many hundred rules and regulations contained provisions for everything ... Initiative was a word without meaning.²²

Many officers had not seen combat, and in Britain, with little threat of major warfare, administration was over-emphasised at the expense of training. One unit faced completing 61 administrative reports at intervals ranging from daily to annually.²³ Red tape:

the prodigious accumulation of “checks and counter-checks” ... [is] the distinguishing feature of the British system, with the effective result that responsibility is abolished and initiative ... destroyed.²⁴

This emphasis on obedience was accentuated, as, pre-1899, much training was drill conducted by a troika of CO, adjutant and RSM.²⁵ Drill had little value in modern combat, though necessary in the Sudan, and it absorbed time that could have been used for sub-unit tactical training. This damaged company and squadron commanders' initiative. Once indoctrinated in obedience, officers passed this on, creating a culture of control. An anonymous article described the effects:

[t]he individual training which sharpens the wits of the soldier and teaches him to exercise his judgement in the use of ground and on outpost and patrol duties, was

²⁰ D French *Military Identities* (Oxford 2005), pp 183-4.

²¹ *BA LXIV* (1900), p 71; Col Maurice *Sir Frederick Maurice* (1913), pp 94-6 citing contemporary material.

²² 'Efficiency' *QR* pp 279-80.

²³ [*SOs*] *1st Battalion OXLI* (Portsmouth 1890), pp 7-13.

²⁴ 'Efficiency' *QR*, p 274.

²⁵ Lt Col Pollock 'The Training of the Army' *JRUSI XLVII* (1903), p 177.

quite inadequate. Mechanical volleys had usurped the place of intelligent skirmishing.²⁶

Firstly this recognised training's importance in promoting initiative and that before 1899 it had been defective. Secondly it links initiative and ground explicitly, contrasting skirmishing and volleys.

The AG's department, responsible for training, was seen as hostile to tactical initiative and Buller, AG between 1890-1897, was regarded as a centraliser.²⁷ Whatever the prime cause, the results harmed both initiative and realistic training. There were of course exceptions. Maurice and Wolseley had emphasised initiative, while LI, the RA and IA generally allowed young officers more responsibility than line units in Britain.²⁸ Connaught tried to foster initiative at Aldershot while *IDB 1896* endorsed it:

Local circumstances ... may render the precise execution of ... orders... impractical. Delegation of command is a necessity, and commanders must ... take every opportunity of training their subordinates in accepting responsibility... [M]odern warfare renders it imperative that all ranks should be taught to think... and ... act for themselves.²⁹

This, however, was heavily qualified as it also emphasised volleys and omitted fieldcraft and skirmishing, both demanding individual initiative.³⁰ Judging by Tirah and 1899, *IDB*'s endorsement of initiative was largely unimplemented. Here one encounters the gap between injunction and implementation. To introduce low-level initiative required more than a few sentences in a drillbook. Col Maxse summarised the problem's cause:

the home training of the British officer before [1899] was calculated to stifle the most precious qualities an officer can possess... resourcefulness and initiative.³¹

When officers' initiative was curbed, the situation was worse for soldiers.

²⁶ 'Official Despatches' *EDR CXCII* (1900), p 304.

²⁷ *BA LXVII* (1901), p 534.

²⁸ Lt Maurice *The System of Field Manoeuvres* ... (Edinburgh 1872), pp 10-11, 23-5. But Parsons felt that some gunners were hidebound, *L/MIL/7/10839 'LAR 1902-3'* pp 4-5.

²⁹ *ANG XXXVII* (1896), p 14; *IDB 1896* pp 129-130.

³⁰ Tables 17 and 18.

³¹ Col Maxse *Seymour Vandaleur* (1905), pp 136-7.

Initiative in South Africa

Immediate Analysis

Criticisms of poor initiative in Tirah were often oblique as Chapter 2 argues, but in South Africa inertia was sharply attacked from the war's start. *The National Review* urged the need for: 'self reliance and individual initiative in...officers ... and even in each ... private.' Initiative was vital in modern fighting and increasing it was the most urgently needed reform.³² The magazine, edited by Col Maxse's brother, had naturally good links with Service opinion. An officer described an extended-order assault:

the men could not possibly be under the immediate control of even section commanders... [they] must be trained to act independently...Volley firing would be practically impossible.³³

He also identified the relationship between training and initiative. Roberts' Pretoria committees emphasised initiative. A Cavalry Board criticised poor-quality personnel, suggesting that improving standards would enable more initiative to be delegated and looser formations introduced, while 7 Division recommended that:

greater efforts be made in our peace training to develop the individual intelligence of the soldier, and make him think more for himself, so that when necessary he would be more able to act on his own initiative.³⁴

This confirms that prewar training had impaired initiative. Gen Pole-Carew urged adoption of double companies, the infantry equivalent of the Squadron System and NCOs' importance in action.³⁵ Strengthening sub-units organisationally enhanced low-level initiative by weakening COs' powers, while Pole-Carew's recommendations were key features of the German methods of inculcating initiative. That Roberts' committees, which sat during the war, stressed initiative suggests the importance of improving it.

Buller complained: 'our Officers lack initiative and independence of spirit.' He

³² 'Greater Britain-Lessons of the War' *NR* XXXIV (January 1900),p 960.

³³ Chapter 2; 'Akela' 'Ladysmith' *The Bugle* (DLI) XII (1900),p 3363.

³⁴ WO 108/250 p 3; WO 108/254 p 12; Chapter 3.

³⁵ WO 108/253 pp 5,1.

somewhat unfairly blamed WO overregulation for the defect, as AG he had been responsible for training policy and discipline. Capt Vaughan remarked:

[a]ll ranks must be taught to think. The greatest fault in our training is that in peace subordinates never think for themselves.³⁶

Vaughan, a South African veteran, writing at Camberley in the aftermath of the war, suggests the direction of the future elite's thinking. Lt Col Morrison condemned lack of initiative, recommending less rigid training, while Lt Walker stressed: 'Infantry must learn individually to act and think for themselves.'³⁷ Gen Wood criticised the state of low-level training, which he saw was becoming more important as weapons forced dispersal:

Every report from South Africa leads to the conclusion that our rank and file are as untrained as they are brave, and the failures in scouting, in outpost work, in taking cover, in improving shelter, and in nearly all those duties which it is the province of the Company Officer to teach, are ... notorious.³⁸

Many of Wood's criticisms involved poor initiative, while his candour, as AG he was responsible for training, suggests the problem's scale. The Akers-Douglas Committee later attributed defective officer initiative to poor training.³⁹ Roberts emphasised to Lansdowne that the:

treatment of our soldiers in the future must be very different from what it has been in the past, both as regards life in barracks and training for war. Men must be left much more to their own resources, and taught to think for themselves. The Colonials are far ahead of our men in all [MI] work. They can take care of themselves and do not work as if they were parts of a great machine.

His reference to 'MI work' suggests the new importance of detached duties. The Army's stress on mobile operations increased the significance of increasing initiative. Roberts also suggests the importance of administrative measures in improving initiative

³⁶ BULPS 2065 M /SS4 /18 'Further Papers ... Natal Army' M3 27/11/00 p1; Vaughan 'Cavalry Notes-South Africa' *JRUSI* XLV (1901),p 454.

³⁷ 'Lessons to be Derived from ... South Africa' *JRUSI* XLV (1901),p 822; 'The Infantry Attack Supported by Artillery' *JRUSI* XLV (1901),p 1324. Both authors were South African veterans.

³⁸ BalPs 13/33 'Wood Memorandum 4/10/00' p 2. Wood had already started remedial action.

³⁹ *Report of the Akers-Douglas Committee ...* (1902), p 30.

by encouraging higher-quality recruits to enlist.⁴⁰

After the war a wide range of individuals analysed defective initiative. Maj Ellison blamed many South African failures on over-control which had consequently caused officer inertia, commenting that:

the importance of the company commander's role in modern war had not... been recognised ...Speaking broadly, the main tactical teaching of the late war has been that the individual training of every officer and man increases in importance in direct ratio with the improvement in weapons...even in the lowest ranks, intelligence, self-reliance, and technical knowledge have been found ... indispensable.⁴¹

Ellison aided Henderson in preparing *CT 1902* and had close links with Balck. His stress on companies followed Germany's example. Gen Warren warned:

the... mechanical duties ... inculcated by ... Frederick were in his day necessary..., yet nowadays they go against success; still we require mechanical drill, but it is that which develops individuality... The soldier can no longer be treated as merely part of a machine.

Warren's analysis of drill may appear confused, but that an officer, who was seen as authoritarian, urged more initiative suggests the depth of change.⁴² Others were equally forceful:

The rigid discipline which discourages individual initiative, requires to be replaced by an intelligent system of tactical education, the aim of which is to teach men to cultivate ... self-action and self-control.⁴³

The National Review criticised poor scouting and outposts as one of the war's main lessons, blaming these defects on the Army's destruction of initiative.⁴⁴ 'Regimental Officer' recommended that:

skirmishing and attack practices... to take the place of the endless barrack-square drills. *Individual action to be encouraged at all times, and the recruit taught to think and act for himself* (sic). Interference... to be discouraged once a man is trained.⁴⁵

⁴⁰ RPs 7101-23-110-3 F731 2/8/00; Chapter 2.

⁴¹ EPs 8704-35-33 'Some administrative lessons of the war II' pp7-9.

⁴² 'On Discipline' *NR XXXVIII* (1901), p 629. He allegedly arrested Churchill at Spion Kop !

⁴³ WA Baillie Grohman 'One Cause of Our Defeats: The Service Rifle' *FR LXVII* (1900), p 688.

⁴⁴ 'The Story of the Boer War' *NR XXXV* (1900), pp 33-4.

⁴⁵ 'Regimental Officer' 'Lessons of the South African War' *USM XXIII* (1901), p 74.

Lt Col Walsh, an LI officer, recommended more interesting training and less drill, suggesting that delegation to companies would improve training and develop initiative. Walsh stressed scouts, sections and 4-man groups, which he felt were a good means of training the soldier: 'to think and act for himself, and leaders to take the initiative,' while double companies were: 'the most important tactical fighting unit.' The British made companies the infantry tactical unit post-South Africa. Walsh urged that:

[y]oung officers, [NCOs] and scouts should be trained ... to think and act for themselves and take the initiative as much and as often as possible.⁴⁶

Lt Col Plowden, a Tirah veteran and LI officer, stressed skirmishing as it increased initiative. He defined it thus:

The men follow the lead of their officers, *thinking and acting for* (sic) themselves. By this is meant that they judge where to find cover, how to make the best use of it, when to leave their cover, when to fire... what to fire at...Hitherto these ... have been performed only by word of command.⁴⁷

This is another link between initiative, fieldcraft and independent fire, reflecting the fact that combat was changing towards interconnected skirmishes. Plowden had seen the need for tactical change during Tirah and he developed his analysis using South African material. If Plowden's comments referred to his own unit, it would suggest that even some LI units were backward. He concluded:

our system stifles all initiative in officers and men, and we train both to dependence on immediate superiors, who in their turn depend on others ...[N]either officers nor men have the pluck to act independently.⁴⁸

IDB 1896's injunction on initiative had clearly not been implemented.

The Cavalry did not escape criticism despite the fact that the Squadron System, which should have promoted initiative, had existed since the early 1890s. Col Younghusband criticised the arm's destruction of individuality; on extended battlefields: 'we cannot promote too highly the individual intelligence of the trooper.'

⁴⁶ 'Battalion Training and Battle-Training' *USM XXIII* (1901), pp 628,630-3.

⁴⁷ *Notes on Skirmishing* (Lahore 1900), p 284.

⁴⁸ *Ibid* pp 286,296.

Another cavalryman, Col Porter, remarked that South Africa: 'was a private soldier's war, as under the altered conditions he was compelled to act on his own initiative.' Col Graves recommended: '*individual* (sic) initiative' and criticised centralising COs for suppressing it, while Lt Col Wogan-Browne remarked:

Our squadron leaders are so accustomed to act by words of command and to wait for orders, that it is difficult to make them act ... on their own initiative. It is the result of years of strict enforcement of the old regimental system, under which all orders emanated from the orderly room, and nothing could be done by the squadrons... [O]perations which gave scope for individual and independent action... were seldom if ever practised. Everything was strict methodical drill.⁴⁹

This shows how generations had been indoctrinated by drill, as well as revealing how poor training had been before 1899. These criticisms of defective initiative suggest recognition of changing cavalry tactical priorities towards detached duties away from shock.

Four influential officers, Lt Cols Callwell, a future DMO, May, a Camberley DS and general, Pilcher, an MI expert and general, and Clarke, a member of the Esher Committee, urged inculcating initiative. Callwell considered that extension was tactically essential, deducing:

The more dispersed formation infantry assumes the greater ... the responsibility of subordinate leaders ... [I]t is the judicious leadership, to the soldierlike example and to the ready resources of captains of companies and their subalterns and sergeants that the regiment must look to.

This suggests commanding by leadership rather than by coercion, but he did not mention changing discipline directly. Emphasising companies recognised their new tactical importance. Callwell also saw arm-requirements differed: 'the infantryman and gunner may look to their officers; the trooper must look to himself.' Others later emphasised the need for high-quality cavalrymen, capable of initiative, suggesting the arm's growing tactical importance and the lesser tactical role of shock compared to

⁴⁹ 'The Horsemen of the Future' *MR* IX (1902), pp 83-4; *BA* LXVI (1901), p 20; 'Lessons from the South African War chiefly from a Cavalry point of view' *USM* XXIV (1901-02), pp 257-8 'What is Required to improve the Training of Our Cavalry in Peace Time?' *USM* XXIV (1901-02), p 265.

reconnaissance.⁵⁰

May, writing at Camberley, emphasised that we must: 'do all in our power to make men reason and act intelligently on their own responsibility.' Consequently training must be made more interesting and more books provided as they: 'cultivate intelligence and I believe intelligence second only to courage as a military quality.'⁵¹ This is another contemporary recognition of education's new importance and its links to initiative. May confirms Wavell's analysis. Pilcher saw:

the necessity of developing the intelligence of the individual....under a hot fire neither battalion commanders, captains, nor section leaders will in future be able to exercise any great amount of control, and the man's own resources in intelligence and courage will generally have to guide his actions.⁵²

Pilcher apparently saw intelligence as synonymous for initiative. Col Clarke urged:

"Laputan methods" which waste the time and dull the intelligence of the soldier must be abandoned. If we have "stupid officers" and "infinitely stupider private soldiers"... they are the results of a system which tends to destroy the initiative and individuality that all sound methods of education must seek to promote. In place of prescribing formulae, which according to the egregious orders not long ago published at the Curragh, "are to be known by heart by all ranks who have passed their drills," it is essential to cultivate the individual intelligence by every possible means. The days when mechanical obedience to accustomed words of command sufficed for the needs of an army have ended for ever.

Clarke stressed the importance of training at all levels as well as the need for systematic changes to increase initiative. Hitherto colonial campaigning had been a quicker means of promotion than professional study. Clarke felt that these campaigns were unrepresentative of major warfare and had damaged performance in South Africa.⁵³

Influential civilians analysed initiative. Amery emphasised delegation, initiative, education and training, and, as NCOs were more important tactically than ever, he urged

⁵⁰ *The Tactics of To-day* (1900), pp 57-8; 59; 103; Chapter 5. Callwell suggests the change in cavalry tactics, as before 1899 shock action meant that troopers were under tight control.

⁵¹ *A Retrospect on the South African War* (1901), pp 41, 55.

⁵² *Some Lessons From the Boer War* (1903), p 44.

⁵³ 'Training of the Army' *The Times* 28/2/01 p 8.

training them better.⁵⁴ He argued that: 'the ordinary officer loses rather than gains in intelligence and initiative' while serving. Responsibility, particularly for training, was the remedy. Amery highlighted the need for intelligence, moral qualities and education as modern warfare demanded more of individuals.⁵⁵ Gwynne, the chief Reuters correspondent in South Africa, writing rather later also stressed initiative and more extended formations. Consequently NCOs would have greater tactical importance. He summarised his influential respondents' views as:

[m]uch has been gained in present Infantry training from the war, chiefly in the encouragement of individual action...By making the soldier feel that he is a real and necessary part....and by explaining the aim and object of his functions, his intelligence is being improved as well as, to a certain extent, his self-reliance.⁵⁶

Several commentators stressed the need to improve the quality of recruits to enhance initiative. Amongst them was Capt Cairnes, later Secretary of the Akers-Douglas Committee, while an anonymous article in *Blackwood's* was explicit:

Every advance in military tactics has been dictated by the improvement in the weapon available...[I]t has remained for the Boer in the late war to effect a ... further tactical change by putting an independent, intelligent man behind the rifle... So we must conform ... and put intelligence behind our rifles...[T]he intelligence which we seek must not be blind or unreasoning: it must be that of the individual whom training has pointed out as fit to be intrusted (sic) with independent action when he finds himself away from a guiding voice.⁵⁷

The article urged that better-quality soldiers should be recruited; it then sketched one unit's attempts to improve soldiers' conditions. Another article stressed improving pay and conditions to attract better men, with special incentives for good SNCOs. It recommended the:

abolition of irritating small stoppages ... privacy in barracks, freedom of civil domicile to re-engaged soldiers... and a more enlightened system of training, entailing the cessation of much needless drudgery.

⁵⁴ *The Problem of the Army* (1903), pp 192-195.

⁵⁵ *Ibid* p199; Appendices E&F, pp 188-9; pp186,188.

⁵⁶ *The Army on Itself* (1904), p131. Original underlined.

⁵⁷ Chapter 2; Capt Cairnes 'Canteens' *NR XXXVIII* (1901), p 437; Col Vincent 'Lessons from the War' *USM XXIV* (1901-2), pp 37-9; 'The Elevation of Thomas Atkins' *BWM CLXXII* (1902), p 491.

Roberts had already made these points after Tirah.⁵⁸ The quotation also suggests how an enlightened unit could improve discipline without leaving much trace.

The RCWSA and Initiative

As the above section shows there had been much emphasis on inculcating initiative during and after the war. The RCWSA attached similar importance to initiative. Paralleling similar conclusions made after Tirah, it noted that:

long-range arms and smokeless powder involve an immense extension of the lines of battle, diminish the power of control by [COs] and increase the degree of individual intelligence required in each individual private.

This implies the need for delegation and by 'intelligence' they clearly meant initiative.

Many witnesses, Roberts, Kitchener, French, Haig, Colvile, Crabbe, Ian and Bruce Hamilton, Hilyard, Hunter, Gatacre, Methuen, Paget, Plumer, Baden-Powell, Kelly-Kenny, and Wolseley stressed instilling initiative in subordinates. Buller wrote on initiative for the RCWSA. He saw financial responsibility as important for developing it. That these witnesses ranged from the older to the coming generation suggests the importance of improving initiative.⁵⁹ Colvile, a Guardsman, criticised prewar priorities:

While a strong advocate of smartness and unbending discipline, I am inclined to think that the former quality has been given undue weight in the selection of [NCOs]. In battle a great weight of responsibility often falls on these men ... it is of the utmost importance that they should be quick, intelligent, resourceful, and have an eye for country.⁶⁰

Later the Leinsters reinforced Colvile's conclusions on NCOs; they considered that: 'the South African War showed that the peace training of our [NCOs] was hopelessly inadequate;' hitherto they had been selected for drill, not tactical leadership. Colvile's link between intelligence and an eye for terrain is significant as is the indication that NCOs' tactical responsibilities were increasing. Ian Hamilton also linked terrain,

⁵⁸ 'Army Reform' *QR* 193 (1901), pp 196-7; Chapter 2.

⁵⁹ Col Melville *The Life of General Sir Redvers Buller* I (1923), pp 264-5 citing a contemporary document which has not survived. It is possible that it was the document mentioned at fn 77 below.

⁶⁰ *RCWSA Evidence* II p 286.

training, initiative and the new importance of NCOs:

peace training at Aldershot proved ... quite unsuited to ... South African warfare. This... was calculated to stunt rather than develop the initiative of company officers, section leaders and men. In the attack ... company commanders had little leisure to study the ground ... They were... absorbed in waiting for orders from some senior officer in the rear ... [NCOs] were ... ciphers.⁶¹

Several witnesses criticised privates' poor education and intelligence, implying that these had damaged initiative. Roberts remarked that the private's:

individuality had been so little cultivated that his natural acuteness was checked, and his want of resourcefulness, especially at the beginning of the campaign was marked.⁶²

He diagnosed the remedy:

Resource and cunning in the field should be encouraged, especially at manoeuvres. Barrack-square drill and deadening routine should be reduced..., and competition introduced ...into... riding, shooting, skill at arms, detached duties as increased intelligence is essential to work in the field.

Kitchener commented that privates were:

too dependent on ... officers and lacked individuality... Before the war in all combatant branches of the Service, mechanical perfection had been cultivated at the expense of individual resourcefulness.⁶³

Here Kitchener confirms how predominant drill had been before 1899.⁶⁴ Haig felt that the: 'main lesson ... is that modern conditions ... entail [the] higher training of the individual.' Many older officers failed in South Africa because they lacked initiative; Kipling's verse, cited above, had a general as its subject. Kitchener urged that officers: 'should be induced to exercise their brains and strike out ideas for themselves, even at the risk of making mistakes,' while deprecating: 'dull routine which ... moulds [officers] into machines of very limited capacity.' Readiness to accept mistakes represents a switch towards more realistic training. Chapter 9 develops this point. French also felt that senior officers lacked initiative, while Roberts Stellenbosch many

⁶¹ *RCWSA Evidence II* p 112; 'TT' 'NCOs of the Regular Army' *JLR I* (1910), p 317.

⁶² Hilyard, Hunter, B Hamilton, Methuen, CE Knox and Kelly-Kenny; *RCWSA Report* pp 42-47.

⁶³ *RCWSA Evidence II*, p 424; *RCWSA Report* pp 46-7.

⁶⁴ Chapter 4 shows that even the RA had been over-drilled.

senior officers for this fault, blaming COs for inert subalterns.⁶⁵ Colvile, stellenbosched himself, diagnosed:

The greatest fault of our officers... lies in their want of initiative, ... I believe this to be entirely the fault of their superiors... [A] young man fresh from a public school ...is full of ideas; yet, if ... he venture to take any line of his own, ...it is a certainty that ... every senior officer within range will be thundering at him, and after a few such attempts he gives it up and in time he becomes one of the thunderers...It is far better that a young officer should make a few mistakes ... thanhe should become a ... puppet.⁶⁶

Colvile suggests how the Army's culture curbed initiative and the importance of changing initial training to tackle this. Colvile's frankness suggests how concerned senior officers were. Colonel Crabbe, another veteran, remarked that:

The responsibility of young officers and section leaders will ...be increased by ... greater extension.... due to ... modern small arms and smokeless powder; the more responsibility which can be devolved from the captain, first to the subalterns.... then on to the [NCOs]...the greater will be the intelligence and freedom ...[of] the company.

Crabbe recognised that companies required more initiative; this was a key feature of the German system. French insisted on allowing officers initiative and the chance to learn from their mistakes, while Baden-Powell, the new IGC, urged:

Junior officers should be given responsibility from their first entry...With officers accustomed to work on their own responsibility, and with men using their own intelligence working under them, senior officers will be able ...to give their subordinates a free hand...unhampered by the usual (and so often fatal) tugs on the check strings.

Dr Badsey has criticised Roberts' selection of Baden-Powell as IGC, but the latter's attitude towards initiative and training suggests another motive, the need for an IGC, sympathetic towards initiative, to inculcate it in an arm whose newly important detached duties demanded initiative. The Cavalry had not distinguished itself on them in South Africa.⁶⁷

⁶⁵ *RCWSA Evidence II*, Q 19299; *RCWSA Report* pp 52,54.

⁶⁶ Chapter 2; *RCWSA Evidence II* Q 17305; RPs 7101-23-188 Col Chamberlain/Lansdowne 28/8/00; BalPs 13/33 Roberts' 'Memorandum on a proposal ...' p 4; RPs 7101-23-124-2 F478 'Minute Akers-Douglas Co;' *Correspondence relative to the recall of Major-General Sir HE Colvile* (1901),p 3; *RCWSA Evidence II* pp 287, 308, Qs 17297-30; *Ibid* Q 20805.

⁶⁷ *RCWSA Evidence II* p 419; Glossary; *Ibid* Qs 17297-30; *Ibid* p 424; Chapter 5; *Badsey Fire* p195.

Hamilton's RCWSA Paper

Hamilton analysed tactics and discipline on extended battlefields in an annexe to the RCWSA's evidence. This is one of the longest contemporary analyses of initiative and is significant in view of Hamilton's later career. Hamilton described, in words unsurpassed by Maxse, how:

[a] brook, ... or imperceptible fold ... shelter a further advance. Half a dozen private soldiers may find themselves at this spot. If they possess sufficient training...together with new discipline, initiative and enthusiasm to take advantage of it, they will creep on ... [I]f, as a result, the enemy's line is penetrated, even by a few men, the power of ... modern armament will make their flanking fire so ... effective that the position will either be abandoned...or... an assault may become practicable.⁶⁸

Plowden had described similar tactics in Tirah, there are parallels with Boer tactics and an anticipation of 1918-style infiltration. Again initiative and fieldcraft are linked. Hamilton highlighted modern weapons' effectiveness. He recognised that discipline would have to change to complement new tactics and new weapons:

Let each little group understand the common objective. Then leave them to the promptings of their own consciences of what was right rather than to the dread of doing wrong.

This suggests switching from external to internal discipline. His point on objective reinforces the importance of all understanding aims in modern combat. By linking objective to small groups, who would not necessarily be officer-led, Hamilton indicates that combat would be less coherent. His comments on discipline and initiative, foreshadowed in Chapter 2, suggest that attitudes to these were changing. He later remarked:

Of all the rich windfalls garnered by Greater Britain from ... South Africa ... one of the best was her new Discipline (sic). Lessons learnt ... during ... Tirah ... had prepared our minds for the change and the fresh experiences of kopje and veldt soon convinced our officers that, in open country and during daylight, the ancient mechanical discipline ... could not be applied to the new tactics. Armament, necessitating ... wide extensions, isolated the individual. Neither by voice nor

⁶⁸ Lt Gen Maxse *The Soft Spot* (1919), but this had been written during the First World War. It is one of the more important British works on infantry tactics; *RCWSA Evidence II*, p 108.

revolver could the captain [in 1900] dominate a firing line extended at [5-10] paces interval through the uproar ... of a battle.⁶⁹

This of course is not primary evidence, but, supported by primary material, written by an individual intimately involved in the process, it suggests how important the change was.

Conclusion

Many more stressed the need for low-level initiative than after Tirah. That commentators ranged from generals to civilians suggests the strength of South Africa's lessons. Their views were a decisive rejection of close-order tactics. The emphasis on initiative from 1900 suggests that the reforms in the 1890s had been inadequate. Increased firepower was the impelling force; it had clearly been underestimated before 1899. Contemporaries saw that links existed between initiative, tactics, education, training and discipline and that these factors needed to alter to improve initiative. The next sections examine the changes.

Inculcating Initiative from 1900

Inculcating initiative started during the war, while training was transformed with more extended-order work and greater emphasis on sub-units.⁷⁰ The Army overhauled its tactical manuals, stressing skirmishing and reconnaissance. Administrative simplification reduced centralisation, promoted initiative and freed time for training.

Remedial action began in Britain in early 1900, Wood, the AG, instructed the Royal Reserve and Militia that company commanders were to be given more initiative and that COs were to inculcate their officers with responsibility.⁷¹ Wood's stress on company commanders suggests German influence. It may be argued that orders to the Reserve are unimportant, but with most regular units deployed, they are significant.

⁶⁹ *The Battalion on the Frontier* (Lahore 1899), pp 16-17; *The Soul and Body of an Army* (1921), p 101.

⁷⁰ Chapter 3.

⁷¹ *USG* (21/4/00), pp 312-3, see fn 38 above.

Wood's timing, well before Roberts' Pretoria committees, suggests how urgent introducing initiative was. Wood, inspecting Sandhurst in 1900, insisted that the cadets execute an outpost scheme instead of parading. The Deputy Commandant threatened to resign at this dangerous innovation. That the exercise involved detached duties requiring initiative was probably deliberate. Furthermore Wood had noted the poor performance of outposts in South Africa. That Wood acted so early suggests that Tirah may possibly have influenced him.⁷² Wood also stressed LI work, criticising its absence from the RMC syllabus. Sandhurst company commanders became more involved in training their cadets about this time.⁷³ The new Hythe Commandant began revising musketry training with: 'more emphasis on the individual which high authorities see as imperative.'

From the commencement of [1901] a good deal of weight has been given to skirmishing and to the use of the rifle in action generally. ... The standard reached in this training is, however, always disappointing... [T]here is an absence of a sense of individual responsibility; combination, mutual support and intelligent initiative are wanting.⁷⁴

The timing suggests that Wood had initiated this change as Roberts left South Africa in mid-December 1900. In early 1901 Roberts recommended to Wood that more initiative be introduced into individual training. Wood claimed to have already started this from October 1900 before Roberts returned.⁷⁵ By March 1901 Wood had ordered that company and squadron commanders were to be responsible for training their men. He saw this as the means of regenerating the Army.⁷⁶ It was a key feature of the German Army.

Also in late 1900 or early 1901, Buller issued *Observations on points on which*

⁷² See fn 38 above; Chapter 2. One notes Henderson's comments on Tirah's effect.

⁷³ *Akers-Douglas Report* p 2; Lt Gen Markham, *Ibid* Q 7461. Markham was regarded as ineffective so an external influence, an irate AG possibly, probably caused the latter change; Chapter 9.

⁷⁴ *USG* (16/2/01), p 124; Chapter 4; *Commandant Hythe Musketry Report 1901* (1902), p 5. The Commandant's timing is imprecise, but as Roberts did not leave South Africa until December 1900, it is possible that Wood inspired Hythe's instructions.

⁷⁵ *Midshipman* p 259. This was written reasonably soon after the event described and, though the whole book is secondary evidence, this part may be argued to be primary. It is just possible that Roberts' recommendation was made at the end of December 1900.

⁷⁶ Col Maude 'Army Reform' *MR II* (1901), p 41.

South African Experience seemed to show how our system of training might be improved. Its precise form is unclear, but it was circulated with a reprint of Buller's 1899 Training Memorandum. The latter, as Chapter 2 shows, had been influenced by Tirah. *Observations* may be linked with Wood's efforts in 1900 to enhance initiative. It emphasised:

our Army lacks initiative and independence of action by subordinate commanders and independent and intelligent action [by soldiers]...In field practices drill ceases, and [COs] must ...allow more independence ... and educate all ranks to act more on their own initiative. It is better for a man during field training to do wrong than to do nothing.⁷⁷

Later Buller criticised over-drilling, adding: '[i]t behoved officers to do their utmost to train the individual intelligence of all ranks.' Separately he commented that close-order tactics cramped initiative. Buller stressed NCO initiative and scouting, criticising strict adherence to regulations. Though Buller did not command at Aldershot for long afterwards and therefore had limited ability to cause change, his views suggest how South Africa had changed attitudes to inculcating initiative.⁷⁸ Before 1899 Buller had been seen as a centraliser. Gatacre at Colchester also enhanced opportunities for young officers and NCOs to exercise responsibility after returning from Africa. The acting CinC India instructed that all ranks were to show initiative, while the 1901-2 Indian Musketry Report criticised stereotyped tactics, noting that soldiers were now taught to use cover and did so intelligently. The Indian comments may represent Frontier as well as South African lessons.⁷⁹

Roberts' *Memorandum on Musketry Efficiency*, issued in 1902, stressed sub-unit training, itself fostering initiative, and that:

[i]nstruction in barracks and ...in firing exercises [is] designed to train individuals

⁷⁷ It has not survived but is summarised in *BA LXVI* (1901), p 155. It is possible that *Observations* was based on Buller's RCWSA paper, see fn 59 above.

⁷⁸ *USG* (30/3/01), p 247; *BA LXVI* (1901), pp 178, 192; BULPS 2065M/add 2 SS-64-66 69-84 'Remarks at the Officer's Clubhouse 17/9/01'

⁷⁹ *RCWSA Evidence II* Qs 168448-53; *ANG XLII* (1901), p 941; L/MIL/7/2462 'Circular Memorandum Musketry 1901-2' pp 5-6; Chapter 2.

to use their own intelligence and judgement...and ... to practice all ranks in selecting and making the best possible use of natural cover.⁸⁰

Roberts also emphasised to Kelly-Kenny, the new AG, that:

[t]he greatest care should be taken to teach [troopers] to scout in an intelligent manner... The whole system of instruction should be the encouragement of individuality.⁸¹

This instruction shows how much cavalry training had altered when it is compared with the *CDB 1898*'s emphasis on drill. More or less simultaneously Roberts issued instructions on initiative, training and extended frontages.⁸² These do not survive, but are another example of contemporaries linking the three factors. That the CinC issued them suggests their importance. Also in 1902 the new manuals: *CTrg 1902*, *IT 1902* and *FAT 1902* stressed initiative far more than their predecessors. The whole suggests a coherent attempt to foster initiative.

Based on Wood's and Roberts' instructions, *MRs 1903* had far less on volleys. It ordered: 'exercises in movement and fire must be set especially with the view of making [recruits] think and act for themselves. The new practices were based on independent fire and fieldcraft. Both required initiative.'⁸³ Hythe was one of the Army's few central training schools; many infantry and cavalry officers and NCOs attended and it thus had Army-wide influence.

Some of the evidence cited above is incomplete, but collectively it suggests a powerful, coherent attempt to modify training and tactics to increase initiative. There does not appear to have been a pre-1899 equivalent, though Tirah had triggered some change.

'Infantry Officer' suggests that some results were already apparent by March 1901:

⁸⁰ *BA LXVIII* (1902), p 427.

⁸¹ RPs 7101-23-124-2, F 479 7/5/02; Chapter 5.

⁸² *BA LXVIII* (1902), p 406.

⁸³ *MRs 1903* p 30. Tables 17&18; Chapters 4 and 6.

[t]he new method of training ... is tending towards inculcating habits of self-reliance and independence ... [T]he private ... is to become ...capable of thinking and acting for himself, and not....a mere machine. The machine was good enough in the days of "Brown Bess" when troops could be manoeuvred in close formation to within 300 yards of the enemy; but now it is necessary to shake out ... at 1000 yards, it is obvious that men who may find themselves 10 or 20 yards from a comrade, and perhaps 100 yards from a section commander, must ... "play the game off their own bats."⁸⁴

The article was on shooting, suggesting that contemporaries saw that the link between independent fire and initiative was important. The 'new method' may suggest the early results of Hythe's changes, though the Commandant, as noted earlier, was less convinced on progress.

Administration and Initiative

The Army modified its administrative system to free time for training and to encourage initiative. The Dawkins Committee reviewed the Army's clerical and administrative system to promote decentralisation. It noted that the:

future training of the troops will be far more arduous and incessant... If [this] is to be done, officers and men must be given time in which to do it. Freedom from ... minute regulations will enable the soldier of every degree to increase his power of thought and...individual responsibility.

Its work was based on the principle of:

Delegation of authority through the whole chain of command... so that every [CO], company, or squadron commander or officer, every [WO] and [NCO] shall have his sphere of decision.'

It was followed by another committee on simplifying regulations. The Special AO 1902 announcing the Army Corps organization also gave greater administrative freedom. This would have promoted initiative and, by reducing paperwork, would have freed time for training.⁸⁵

Service Pay, introduced in 1903, was another administrative method of improving initiative. It aimed explicitly at: 'increasing efficiency' by more pay for better

⁸⁴ Chapter 2; 'Army Shooting, and Its Improvement' *BWM* CLXIX (1901),p 320. Finkelstein attributes this to Lt Col Mockler-Ferryman, an LI officer.

⁸⁵ *RCWSA Appendices* (1904), Appendix 43; WO 33/2888 p 1; Special AO 4/3/02 pp 14-5.

performance; qualification being based on: 'a fairly high standard of individual discipline ... physical and military efficiency.' The cavalry standard was:

a good scout with ... knowledge of simple map reading, ... power of observation and reporting, a good horseman, groom, horse-master and man at arms. He should have an adequate knowledge of troop and squadron drill.

Mapreading was an essential soldier skill in dispersed combat and education was vital for it. Rimington's brigade had issued all troopers with maps and Rimington linked mapreading, reconnaissance training and developing initiative. The Cavalry were encouraging mapreading throughout the arm.⁸⁶ For infantrymen the standard for the award of Service Pay was: 'a good skirmisher and should combine skill at arms with ... physical development.' Arm-criteria stressed individuals' abilities in decentralised combat. For cavalry collective skills were subsidiary to decentralised ones. Service Pay could increase a private's income by over 50%, a considerable incentive. The repeated mention of 'efficiency' suggests the influence of the National Efficiency Movement, established because of South Africa.⁸⁷

That administrative measures reinforced tactical changes shows that the reforms were important, while such a combination was more likely to be effective in increasing initiative than just changing tactics.

Training and the Tactical Manuals

AO 189 of September 1901, amending *KRs*, stated that: 'efficient instruction and training of all ranks is ... of paramount importance.' For officers it stressed: 'the development of resourcefulness, prompt decision, and ... readiness to accept responsibility;' for soldiers: 'the development of individual intelligence and self-reliance.' It continued:

The officer ought to be in all respects the instructor and leader of his men.... He

⁸⁶ WO 123/45 AO 193; WO 279/9 p 33; WO 27/491 IGF 'Report 1905' p 8.

⁸⁷ *Text Book of Military Administration and Law* (nd), pp 14-15; GR Searle *The Quest for National Efficiency* (1971). Several soldiers, mainly sappers, were founder-members. It partly inspired the Dawkins Committee.

must show himself superior to the soldier in knowledge, experience and strength of character, and he must be competent to carry out his duty in any situation whatsoever without shirking from responsibility, or, when thrown on his own resources, without waiting for orders.⁸⁸

This new emphasis on training has a Germanic ring; no longer would status be sufficient for command. Now professional ability and example, components of leadership, were to be the dominant criteria for officers. Here there are parallels with the LI pioneers.

Wood stressed that Sandhurst cadets were to be taught how to instruct their soldiers. This had not been the case previously; clearly training had increased in priority. NCOs were to be specially trained as: 'competent instructors and leaders of the smaller units in both peace and war.' This was a new emphasis on NCOs, their training, and their duty as instructors. Sub-unit commanders were made:

responsible to their [COs] for ... efficiency ...[in] military training of the men under their orders... This devolution of authority ...depends on a reasonable latitude being allowed to squadron and company leaders... Commanding and General Officers should not interfere... [S]quadron and company commanders will be judged by the readiness for war of their ...commands.

This suggests that the Cavalry had not fully implemented the Squadron System.

Decentralised training developed initiative. It reflected South Africa's lesson that the infantry tactical unit were companies. This was a major change for Infantry. Both the German and the LI pioneers had emphasised sub-unit commanders' responsibility for training.⁸⁹

The training manuals issued from 1902 accentuated initiative. Significantly they were not entitled 'Drillbook,' suggesting less rigidity. *IT 1902*, based on Henderson's work with input from Ellison, differed markedly from *IDB 1896*. Its preface emphasised in words reminiscent of Clausewitz:

Modern fighting makes heavy demands on each individual... the subordinate leader must be so accustomed to responsibility as to be capable... of using his own judgement to further the general plan; the soldier of acting with intelligence

⁸⁸ WO 123/43 AO 189 pp 4-5; Eds B Condell, DT Zabecki *On the German Art of War Truppenfuhrung* (Boulder 2001), p 5 cites a very similar German regulation.

⁸⁹ Akers-Douglas Report pp 2,4; D Gates *The British [LI]* (1987), p 101; Chapter 9; WO 123/43, p 5.

and resolution when thrown on his own resources... The backbone of ... training is the careful ... instruction of the individual, officer or soldier... and the development to the utmost of his mental and physical powers. But such development is impossible unless free play is given to individual intelligence and initiative. It is therefore forbidden to limit... the freedom granted in these regulations to battalion and company commanders both as regards methods of instruction and the leading of their men in action. Nor are the men to be allowed to degenerate into mere machines.⁹⁰

The emphasis on judgement links back towards Henderson's comments cited in Chapter 2 and anticipates the idea of doctrine. Its long, new section on skirmishing stressed:

Skirmishing implies extended order, in which each individual acts and thinks for himself, and makes use of all his powers, physical and mental, to attain a common object. It is absolutely essential... that ... the intelligence of each recruit should be developed by every possible means, and that a spirit of independent action... should be sedulously encouraged... Skirmishing is the all important formation in warfare against a well-armed enemy.⁹¹

Skirmishing is a tactic and not a formation but this section, probably drafted by Henderson, using LI material supplied by Verner, shows both a direct LI influence and dispersed tactics' new importance. It was far less mechanical than *IDB 1896*'s section on open-order drill. Furthermore *IT 1902* emphasised recruit training far more than *IDB 1896*; this would reduce the risks of poor basic training damaging Army-wide standards.⁹² *IT 1902* also warned:

Constant practice in a stereotyped formation invariably leads to want of elasticity, accustoms all ranks to work by rule rather than by exercise of their wits, and cramps both initiative and intelligence. In peace ... the inherent and paralysing effects of a normal system ... easily escape notice; in war they betray themselves ... in failure. It is therefore strictly forbidden either to formulate or to practice a normal form of attack or defence.⁹³

This strong condemnation, tougher than *IDB 1896*'s, suggests that normal formations were still common. It continued:

[s]ince the conditions of modern warfare render the decentralisation of command in action an absolute necessity, no good results are to be expected unless... subordinate leaders have been trained to use their wits ... and have been called upon to consider the necessity of departing from their original orders.

⁹⁰ *IT 1902* Preface. Both Henderson and Ellison were aware of German developments.

⁹¹ *Ibid* pp134-5; Chapter 2.

⁹² 'Review Infantry Training (Provisional) 1902' *RBC* (1902), pp 159-60, 162-3.

⁹³ *IT 1902* pp 190-1.

This was more emphatic than *IDB 1896*'s qualified endorsement of initiative. *IT 1902* saw that decentralised training was needed to instil initiative and was enlightened about mistakes in training.⁹⁴

CTrg 1902, the British Army's first modern all-arms tactical manual, stressed that:

[s]uccess...cannot be expected unless all ranks have been trained to use their wits... Generals and [COs] are ... not only to encourage their subordinates in so doing by affording them constant opportunities of acting on their own responsibility, but they will also check all practices which interfere with the free exercise of the judgement, and will break down, by every means in their power, the paralysing habit of unreasoning and mechanical adherence to the letter of orders... when acting on service conditions.⁹⁵

It continued:

[d]ecentralisation of command, and a full recognition of the responsibilities of subordinates in action are ...absolutely necessary and leaders must train their subordinates not only to work intelligently and resolutely in accordance with brief and very general instructions, but also to take upon themselves ... the responsibility of departing from, or varying, the orders they may have received.⁹⁶

CTrg 1902's mention of 'general instructions' suggests the need for doctrine which would enable subordinates to interpret them. It concluded emphatically:

[i]f a subordinate, in the absence of a superior, neglects to depart from the letter of his orders, when such departure is clearly justified by circumstances and failure ensues, he will be held responsible.⁹⁷

This was a radical departure; now failure to display initiative was punishable.

Later *CT 1904* emphasised initiative. Roberts impressed on cavalry officers the need to: 'stimulate the keenness and increase the individual intelligence of their men,' noting that:

[w]ith our improved class of men and their better general education, the old methods of instruction no longer altogether meet the case. A higher aim must be given the soldier than merely satisfying the requirements of the drill instructor. He

⁹⁴ Ibid pp 191,193. Also stressed by Brig Gen Wilson 'Initiative and the Power of Manoeuvre' (AMS 1910) ,pp 10-11. Clausewitz also had emphasised this.

⁹⁵ *CTrg 1902* Preface.

⁹⁶ Ibid p 59.

⁹⁷ Ibid p 60; Chapter 9.

should be encouraged that in perfecting himself as a fighting man, he is preparing himself for ... furthering the aims of his country... So that the development of individuality ... instead of loosening the bonds of discipline, will...supply a tie more elevated and more binding... in the spirit of patriotism, and self sacrifice.

This latter represented Hamilton's new discipline. Significantly Roberts saw that society-wide factors had changed and therefore the Army had to alter. Tactically *CT 1904* emphasised detached duties, scouting and skirmishing, all demanded initiative. It differed strongly from *CDB 1898*'s stress on drill and shock which inhibited initiative. Later the IGF noted that the new training of cavalry NCOs should fit them better for detached command.⁹⁸

Roberts stressed the importance of skirmishing, commenting that: '[t]he whole [LI] system was one of developing, not repressing intelligence...of enlisting the zeal of the private as much of the officer in perfecting the whole.' He continued by urging:

the necessity for thoroughly developing the system of trainingpractised by ...Moore. Discipline is as important now as it was.... but self reliance is what is wanted, not the rigid discipline of the barrack square. Officers, [NCOs] and men must be encouraged to think and act for themselves.⁹⁹

This Chapter argues that the changes instituted as a result of South Africa constituted a similar system, while Roberts saw that discipline and initiative were connected.

Henderson and General Maurice, who edited Moore's diaries, are the likely sources for Roberts' information on LI.¹⁰⁰

The new manuals strongly advocated greater initiative. There were not just the above injunctions but their stress on detached duties, skirmishing and reconnaissance for which initiative was essential

Initiative Training after 1902

Roberts wrote to GOCs in 1903 on developing initiative, his letter does not

⁹⁸ *CT 1904* pp ix, 23-6, 19, 27; Chapters 5&8; WO 27/491 'IGF Report 1905' p 5.

⁹⁹ FM Roberts 'The Army-As It Was and As It Is' 19C LVI (1905), p 23; Chapter 2.

¹⁰⁰ ed Maj Gen Maurice *The Diary of Sir John Moore* (1904). Roberts cited this work in this article while Henderson stressed LI, Chapter 2.

survive, but that he wrote suggests initiative's importance. French, GOC Aldershot, also emphasised company and squadron training, thereby enhancing initiative.¹⁰¹ Wood commanding II Corps reported that:

The individuality of the men has been developed, and advantage of ground is taken by the men. The section leaders have much improved, and many are fairly acquainted with their duties.

Wood had also reduced guards substantially, releasing men for training and no doubt improving morale.¹⁰² A chief umpire reported on the 1903 Manoeuvres:

Taken as a whole there was more initiative in the Infantry than could be seen in any manoeuvres before [1899]. The extensions ... were wider, the men were disposed to seek cover ... and the advance was more realistic and less like the stereotyped line which we were so often accustomed to see.¹⁰³

The above suggests that there was a coherent attempt to develop initiative in 1903.

Roberts' letter may have inspired it, but French and Wood were independently aware of initiative's importance.

The Army in India also stressed initiative. Gen Burnett intended that the 1903 Poona Manoeuvres, based on South Africa, would:

test the initiatory powers of officers and non-commissioned officers... to force all ranks to think for themselves, to learn to read a map...and above all, not to adhere blindly to the traditions of the barrack-square.¹⁰⁴

As argued earlier, mapreading is a skill indicating decentralised combat and demanding education. Kitchener's 1904 memorandum on training blamed many South African defeats on poor training. He instructed that:

It is impossible to lay too much stress upon the necessity for developing individual intelligence and initiative to the fullest extent... the great object must be to render officers and [NCOs] capable from the very first of exercising command.¹⁰⁵

¹⁰¹ BA LXXIX (1907), pp 149-50, Chapter 2.

¹⁰² Wood *Midshipman* pp 270-2. Guards are unpopular as kit has to be prepared and off-duty time surrendered. Wood wrote fairly soon after these innovations.

¹⁰³ WO 279/516 'Report Training II Corps' p 12, 'Reports Combined Manoeuvres 1903' p 56.

¹⁰⁴ Capt Dawson 'Tommy Cornstalk and the Empire' *JUSII* XXXII (1903), p 83. Original italicised.

¹⁰⁵ LMIL/17/5/1617 p 224 citing LAO 246 11/4/04.

He stressed cavalry reconnaissance, while his Infantry Training Test included scouting and outposts with marks for initiative. Haig, IGC India, also stressed cavalry reconnaissance. Kitchener associated responsibility for training with increased professionalism and initiative:

The whole secret of preparing for war is a matter of training and instruction, and [COs] ... who profess or show their incapacity as instructors and their inability to train and educate those under them for all situations of modern war must be deemed unfit for the positions they hold.¹⁰⁶

This emphasis continued till at least 1910 when the Indian Staff Conference discussed 'The Development (sic) of initiative by suitable training.' The debates are only summarised but it is clear that imaginative training had occurred during the intervening period. It would have developed initiative.¹⁰⁷

More or less simultaneously the Army's 4 senior commanders were all stressing initiative in training. That India with its better facilities for training than Britain was highlighting initiative suggests that permanent Army-wide change was occurring.

Col Parsons, Buller's ex-CRA, conducted initiative training in Britain. Parsons had issued instructions on training junior ranks' intelligence during the voyage to the Cape in 1899, suggesting that he had realised the need for initiative early. He later wrote on initiative at the RAI's request. It is significant that the RA, who were generally felt to have shown initiative between 1899-1902, considered that such a work was necessary.¹⁰⁸ Parsons began provocatively:

I have long thought that the training of the individual intelligence of officers, NCOs and men has either ... not been attempted at all, or has not been carried out on common sense lines... [South Africa] has shown that ... too many weak points have been left. ... Some people argue that the training of a soldier must... stifle initiative, ... and resource ... because a soldier must be trained to rigid discipline. Nothing could be more unsound and fallacious ... A well trained soldier... understands the necessity for ... discipline. He therefore conforms to it

¹⁰⁶ Ibid p 213; HPs 3155- 40 Box 'Season 1903-1904 Inspection Notes.' Haig's encouragement of reconnaissance and initiative probably had substantial results. Chapter 9.

¹⁰⁷ L/MIL/17/5/1811 pp 5-6.

¹⁰⁸ Maj Geddes 'Officers' Despatch Riding Competition at Salisbury Plain' *PRAI* XIX (1902-3); PP Diary Natal.

intelligently. His training should teach him to act for himself.¹⁰⁹

Parsons saw that 'internal' discipline was now needed to complement initiative. His pamphlet was widely disseminated under Wood and Roberts' patronage. Parsons also emphasised initiative during artillery training and later when he was IGRA India. *FAT 1902* also emphasised the need for initiative.¹¹⁰

Unit training altered due to South Africa and possibly because of Tirah. The DLI's 1901 company field training in India now included scouting, skirmishing and several 2-sided exercises. They concluded: '[t]he course has greatly benefited the men who have learned to act on their own individuality in taking cover and crossing open spaces,' suggesting even in this LI unit that soldiers had not been taught fieldcraft.¹¹¹

NCO Training

Amery considered that NCOs pre-1899 were: 'frequently selected more for their capacities as clerks or as a reward for good behaviour than for their military qualities.' That the JNCO promotion syllabus was biased towards drill and administration corroborates his accusation.¹¹² The Leicesters criticised ignorant old-style NCOs and emphasised developing NCOs' mental and instructional abilities.¹¹³ As Colville had pointed out, NCOs' tactical responsibilities had increased. Wood began a L/Cpls school in 1904. Its syllabus included mapreading, scouting and education. *QRs 1899*'s NCOs promotion-syllabus did not include the first two skills which involved decentralised tactics.¹¹⁴ Education potentially increased initiative and was vital for mapreading. Wood's school was a victim of economies, but his attempt suggests South Africa's

¹⁰⁹ 'Hints on training the Intelligence and Powers of Observation of Officers, [NCOs] and Men' *PRAI* XXVIII (1901-2), pp 503-4.

¹¹⁰ *ARSG 1901* (1902), pp13,17; L/MIL/7/10839 'IAR 1902-03' p 1; Chapter 4.

¹¹¹ *The Bugle* XII (Jun 1901), p 6.

¹¹² LS Amery *THWSA* II (1902), p35; HWPs 3/1/1-2SA Ser 70 5/12/99 for one example; *QRs 1899* pp 415-420.

¹¹³ 'Gael' 'The Mental Evolution of a Soldier- A Sketch' *TGT* I (Oct 1905), pp 2-4.

¹¹⁴ Capt Arthur 'The Soldier as Student' *FR LXXXII* (1907), p624; WO 163/9 pp112-3; Connaught praised Wood's school, WO 27/491 'IGF Report 1904' pp 22-3.

influence. One division held brigade NCOs classes and the Leinsters' NCO training included skirmishing, outposts, mapreading and signalling, all skills involving decentralised combat.¹¹⁵ The KOYLI's emphasised NCOs' man-management skills and aptitude for command as: 'section and squad commanders' duties have become more responsible both in barracks and the field.' They highlighted NCOs' instructional duties while they were to hold the training manuals. They encouraged each NCO: 'by careful reading he must qualify himself to lead his section in the attack.' All were to achieve a 2nd class education certificate. Emphasis on reading and education suggests that theory's importance was growing even for NCOs.¹¹⁶ General Douglas, a future CIGS, initiated a competition to test NCOs' initiative and their use of cover and ground. The latter two skills, as Chapter 6 argues, also involved initiative.¹¹⁷

Scout Training

Scout training was both tactically necessary and developed initiative. Baden-Powell wrote the most influential work on reconnaissance, reinforced by his successful defence of Mafeking. Though his work was based on Matabeleland and India, it effectively was part of South African's lessons, being proof-read at Mafeking. It emphasised: 'the ability to act "on your own hook"... without wanting an officer or [NCO] at your elbow to tell you exactly what to do.'¹¹⁸ In tone it was designed for soldiers. It was issued to companies in one unit and was followed by many books on scouting.¹¹⁹ Haig saw scout-training as important. He outlined scout training methods to the RCWSA. Several commentators advocated stalking training as:

[w]e are constantly being told that what is needed in the soldier of to-day is intelligent individuality, self-reliance and initiative.¹²⁰

¹¹⁵ WO 163/12 'Annual Report IGF 1906' p73. WO 279/18 p9; [SOs] of the 1st Battalion ... Leinster Regiment ... (Aldershot 1908), p45. This was not in the 1900 version. Lt later FM Dill trained them.

¹¹⁶ *Standing Orders of the 2nd Battalion [KOYLI]* (Aldershot 1906), pp 47-8, 50, 65.

¹¹⁷ BA LXXII (1904), p 524.

¹¹⁸ *Aids to Scouting for NCOs and Men* (Aldershot 1899), p 19.

¹¹⁹ *The Bugle* (DLI) XII (1900), pp 3489-90; BA LXXV (1905), p 249; Eg Col Furse *Scouting* (1902), Capt Carey *Notes on Infantry Scouting* (Allahabad 1902).

¹²⁰ 'Shikari' 'Shikar' *The Antelope* III (1904), p 149.

Later Col Carter lectured officially on 'The Training and Use of Scouts.' This was later published as a manual. Carter emphasised practical training, self-reliance and education, cited Moore and Craufurd, and criticised the British post-1815 'heavy' infantry emphasis. That Carter was a non-LI officer suggests that LI ideas were influencing even 'heavy' infantry.¹²¹

The Cavalry emphasised initiative much more due to the greater importance of reconnaissance after 1902. *CT 1904* stated:

On detached duties, the success of mounted troops will depend chiefly on the initiative, skill and resource of the junior ranks. The importance, therefore of special individual training for every mounted man can hardly be exaggerated.

Later it emphasised that: 'during ... training, the greatest pains must be taken to develop "initiative" (sic), not only in the officers and leaders, but also in the men.'¹²² *CDB 1898* had nothing remotely similar. In Ireland Rimington imaginatively trained his brigade in reconnaissance, commenting after one such exercise:

As far as this brigade is concerned, it is one step more in developing in the cavalry soldier the qualities of Individuality (sic), self-reliance and ability to "carry on" without supervision.¹²³

Baden-Powell and Haig both promoted reconnaissance when they were respectively IGC in Britain and India. The IGF recommended that all troopers were to be taught to scout.¹²⁴ The 12th RLs stressed unit scout-training. In infantry battalions some 80 men per unit were to be trained as scouts. This scale of training, roughly 8% of a battalion's strength, would have improved general tactical standards.¹²⁵ This post-1900 interest in scout training, which even influenced RE recruit instruction, was a Boer War lesson. It

¹²¹ *RCWSA II* pp405-6; *The Training and Use of Scouts* (1905), p 8.

¹²² *CT 1904* pp 47, 218.

¹²³ WO 27/503 '3 Cavalry Brigade Report on the Ulster Scheme' p 5.

¹²⁴ *BA LXXVIII* (1907), p 394; WO 279/516, p 15; BalPs 13/33 'Fragmentary IGC document' pp 29-30; HPs 3155-40 'Notes on Training of Cavalry November 1903'; WO 27/491 'IGF Report 1907' p15.

¹²⁵ Sgt Vass 'A Narrow Escape' *12 RLJ I* (1909); Lt Davis *Scouting and the Training of Scouts in Peace* (Dublin 1907), pp 11, 23.

shows that reconnaissance was far more tactically important after 1902.¹²⁶

Education, Training and Discipline

Soldier Education and Basic Training

Earlier a relationship was proposed between education, initiative, discipline and dispersed tactics. Between 1903-1912 soldier education certificates doubled, suggesting a radical overhaul of the Army's priorities. Contemporaries felt that education enhanced initiative. The 1870 Education Act had caused some improvement but the Army's rate of increase was far higher than would have been accounted by this alone. Entry-level educational and recruit standards were generally low and, as far as can be judged, static.¹²⁷ That RE recruits, who were meant to be skilled tradesmen on recruitment, averaged below the 3rd class education certificate level after some training suggests poor entry-standards. The samples are not large but their evidence indicates that the Army mainly caused the improvement through its in-service education of soldiers.¹²⁸

The first IGF summarised the Army's attitude: '[e]ducation is after all, the bedrock of efficiency.' He tasked the Inspector of Infantry to report on the education of soldiers and how it affected their fighting value. The introduction of Service Pay has been considered above, but qualification for it was partly determined by:

a fairly high standard of ... educational... efficiency ...bearing in mind that individual intelligence is so essential ... in modern warfare.

This was clearly a South African lesson, and motivated some soldiers. AO 193 did not directly refer to initiative, but its mention of intelligence implies it, furthermore its military criteria, examined earlier, emphasised initiative.¹²⁹ Later an education

¹²⁶ Col Ward *Standardisation in Education* (nd), pp 6-7. He was a member of the Efficiency Movement.

¹²⁷ Table 8; HC Barnard *A History of English Education from 1760* (1969), pp 168-172 for education's post-1870 problems. This suggests that civil improvement were not responsible for the Army's.

¹²⁸ WO 123/45, AO 193. Tables 26, 27 and 30. But Roberts acknowledged better entry-level education, see above.

¹²⁹ WO 27/491 'IGF Report 1904' p 22; WO 27/509 'Instructions to Inspectors 30/05/04;' AO 193 p 5; WO 163/12 p 62; Pte Richards *Old Soldier Sahib* (1965), p 208, Schoolmaster Cameron *Recollections of an Army Schoolmaster 1889-1920* (RAEC Box File 1.3). Both are secondary, but, given the money at stake, are persuasive sources.

certificate became mandatory for receiving Service Pay.

A committee examined Army schools in 1906. Two witnesses, FM Wood and Gen RC Hart, felt that both trained soldiers and recruits were too poorly educated for efficiency. Hart considered that:

Education makes ... men more intelligent, which is what we require nowadays when men are often isolated from their officers and required to exercise ... initiative.¹³⁰

The new tactical conditions emphasised mapreading and signalling, while the new weapons, mainly artillery, demanded more intelligence to handle, consequently education's importance was increasing.¹³¹ Schoolmaster Wells supplied a further reason:

the developing tactics of warfare placing more and more responsibility for the movement of his men on the [NCO]... [M]apreading therefore became an essential requisite for the NCO and this soon extended to the private soldier and was included in the Second Class Certificate.¹³²

This is secondary evidence, but is supported by other material, while Wells served throughout the period.

Basic training improved; Robertson, the first to rise from private to DMT, commented:

The soldier was no longer treated as ... being without intelligence... down whose throat it was the business of the NCO to force as much parrot-like drill as possible.¹³³

RSM Plumb felt that the new cavalry school's instruction was much better than the old central depot's: 'cut and dried methods' as it gave more scope to the: 'men's intellectual powers.' Similarly there is a stark contrast between *MRs 1898* and *1903*. The latter ordered that recruit-instructors were to be specially selected, that they were to display:

¹³⁰ WO 163/12 Précis 324, pp 61-2.

¹³¹ Chapter 4 suggests how the new QFs demanded more skill.

¹³² RAEC Box File 1.3 *Man and Boy* p 41. Fns 104& 105 above support him.

¹³³ *From Private to Field Marshal* (1921), p 157. This secondary evidence is supported by primary evidence cited below.

‘forbearance and tact,’ that recruits’ intelligence was to be developed, while training was to be both progressive and interesting.¹³⁴ *MRs 1898* did not mention these points.

The post-1902 manuals recommended improving training far more than the old drillbooks. One manual, typical of many, emphasised:

Discipline, strength of mind and body alone, are not sufficient; quickness, initiative and decision must be developed by individual training.

It continued:

Recruits and all ranks should be encouraged to take an intelligent interest in everything connected with their work. Questions should be simple, and of a nature admitting of a short, intelligent but not parrot-like answer.¹³⁵

Instructors were to be carefully selected and specially trained. Recruits were to be individually instructed, while emulation and keenness were to be encouraged. An officer recommended that:

In order to develop the intelligence of the recruit, practical instruction should be varied by lectures on theoretical subjects....Recruits should be encouraged to question their instructors on any points they do not understand.....Instructors must be patient and tactful, and refrain from discouraging a recruit in any way should he prove more backward than his comrades.¹³⁶

The SLI stressed developing intelligence and hence initiative through questioning soldiers on what they had been taught.

It is unclear how far the injunctions, cited above, on improving soldier basic training were implemented. But the IGF criticised ASC basic training in 1906 for failing to foster: ‘intelligence, resourcefulness, and sense of responsibility.’ This suggests that the hierarchy was determined to continue fostering these qualities. The 1909 ASC manuals emphasised developing them. But recruits suggest that basic training remained

¹³⁴ ‘The New Cavalry School’ *TE II* (1908), pp 97-8. *MRs 1898* p16, *MRs 1903 (Provisional)*, pp 29-30. The latter also stresses decentralised command, p 47.

¹³⁵ *ASC Training I* (1909), pp 5-7. *CT 1904* stresses the need for systematic training and delegation.

¹³⁶ *ASC Training I* p 5; *Ibid* p 6; Capt Bonham-Carter ‘Suggestions to Instructors of Recruits’ *AR VII* (1914), pp 123-4.

tough, though there is no doubt of the direction which the Army intended to go.¹³⁷

Officer Basic Training

Wood instituted the Akers-Douglas Committee on officer education and training in December 1900 because of defects shown in South Africa.¹³⁸ This was before Roberts' return. Apart from general concerns with officer education and the lack of incentives to study, a point also made by Clarke in his *Times* article, several COs complained bitterly:

I consider the training of the Infantry Subaltern to be distinctly against his future efficiency. When the Captain is present the Subaltern as a rule does practically nothing...[E]very thing is done to stifle self-reliance and responsibility, and from the commencement of his career he is trained to look upon himself as a cog in a machine and not a leader... At Diamond Hill ... a young officer... demanded permission to move his company slightly as his men were commencing to suffer... He knew what to do, but feared to take such a small piece of responsibility... I consider every opportunity of delegating authority to young officers... should be availed of.¹³⁹

Such strong criticism suggests both the degree of concern aroused and the likelihood that radical change would result. The Committee criticised Sandhurst: '[l]ittle encouragement is given to originality of mind,' noting that it over-drilled cadets. It recommended more practical training, commenting that cadets did no shooting at Sandhurst, though Woolwich did. This was illogical; Sandhurst trained infantry officers whose men were rifle-armed. The Committee stressed that cadets should be 'proficient in ... scouting ... reconnaissance and the use of ground.' All were South African lessons involving initiative.¹⁴⁰ Sandhurst changed considerably and initiative was emphasised after 1900. Kitson, the new commandant, had revived the RMC Kingston and was probably chosen for this reason, the old commandant having been dismissed following an act of collective indiscipline, a symptom of poor leadership and over-rigid

¹³⁷ [SOs] ...*SLI* (Devonport 1910), p 86; WO 27/491 'IGF Report 1906' p 18; JF Lucy *There's A Devil in the Drum* (1938), pp 28-39. This was written long afterwards and veterans are not noted for diminishing their hardships!

¹³⁸ BalPs 13/33 'Memorandum 4/10/00' p 5.

¹³⁹ *Akers-Douglas* pp 2, 50-51.

¹⁴⁰ *Ibid* pp 24, 21. Chapter 6 for ground's significance.

discipline. The standard and status of Sandhurst instructors improved after 1902.¹⁴¹

This change improved infantry and cavalry officer training, the two arms that had suffered most from defective initiative in 1899-1902. Significantly Woolwich was less criticised, young gunners and sappers had displayed more professionalism and initiative in South Africa.¹⁴²

Wolseley more or less simultaneously deplored the low standard of Guards and Cavalry officers and wished to recruit more graduates. This was implemented from 1900, while the Army expressed concern at the public schools' educational standards. From 1904 incentives were offered to graduates with good degrees and universities were allowed to nominate candidates for commissions, subject to an Army veto.¹⁴³ Some universities established military lecturers and the IGF continued to emphasise officer intellectual development.¹⁴⁴ Detailed analysis in a work on tactics would be inappropriate but raising intellectual standards had implications for improving staffwork and developing doctrine.

Discipline

Courts-martials halved between 1904-1912, suggesting that the disciplinary system had altered radically. Better education generally improves conduct, but it is doubtful whether this improvement was due to education alone. The changes are in many respects elusive, representing altered attitudes rather than new legislation as the

¹⁴¹ *Akers-Douglas* pp 20, 25-6 criticised instructors, and hinted at the previous commandants' unsuitability; RA Preston *Canada's RMC* (Toronto 1969), pp 154, 161-2; *Akers-Douglas* p 25 recommended pscs as instructors, *RMCR* II (1913), recorded all Sandhurst company commanders as psc; in 1899 pscs were exceptional; Maj De Gruyther 'The Royal Military College, Sandhurst' *USM* XXXI (1905), pp 145-6.

¹⁴² *Akers-Douglas* p15.

¹⁴³ AFPs 50304 'University Commissions,' 'Report on Promotion Exams May 1904'; *Regulations under which Commissions ... may be obtained by University Candidates* (1904); WO 35/56 'GS Folder Appendix B'; AFPs 50309 'Summary of Year's Work at the WO 31/1/05' p14. AFPs 50321 'University Candidates May-October 1905.'

¹⁴⁴ RPs 7101-23-207 'Selection for Promotion' p 3. *USG* 4/6/04 Jun 1904, p445 for Cambridge's lecturer, *USG* 23/7/04 p 585 reported that Edinburgh was to appoint a military lecturer and *USG* 27/8/04 p 687 London had 3; WO 27/491 'IGF Report 1907' pp 8-9.

1893 Army Act remained in force until 1906.¹⁴⁵ As argued above, initiative and dispersed tactics demands 'internal' discipline and this in turn requires leadership and a more enlightened attitude to discipline by commanders. A journal commented on the old system:

Whatever were the shortcomings of the British soldier in South Africa, they were the results of his faulty and misdirected training in peace-time; of the mechanical discipline handed down to us from Crimean days.¹⁴⁶

This suggests the continuance of imposed discipline till 1899, the link between it, training and tactics and its ability to damage initiative.

Dickson's cavalry committee in South Africa were the earliest to consider discipline. They recommended that government posts be reserved for veterans, post-service employment was seen as attracting more intelligent recruits who were more likely to behave well and show initiative. They also advocated better barrack accommodation with more privacy. They suggested the modification of:

The present irksome regulations as regards all-night and other passes .. Plain clothes to be worn by all NCOs when off duty out of barracks and by all men on furlough. All unnecessary riding school and foot drill to be abolished. Burnishing of steel work to be absolutely forbidden... Barrack yard fatigues to be reduced to a minimum.¹⁴⁷

They recommended that COs should be able to discharge indifferent characters and allowing recruits choose their regiment. All these measures would have indirectly improved discipline and made the Army a more attractive career, thus indirectly promoting initiative. Reducing fatigues meant that more time and men were available for training. Wood, when GOC II Corps, cut duties and guards ruthlessly.¹⁴⁸

Lt Col May, a Camberley DS, concluded: 'old-fashioned discipline has in modern warfare been largely superseded by intelligence. ' He blamed over-supervision for

¹⁴⁵Table 7; RH Ahrenfeldt *Psychiatry in the British Army in the Second World War* (1958), pp 77-81; *ANG XXXVII* (22/8/96), p 707.

¹⁴⁶ *USG* 30/5/07.

¹⁴⁷ *WO* 32/6781 'Cavalry Report' p 2.

¹⁴⁸ See fn 102 above.

damaging initiative and recommended appealing to soldiers' sense of honour rather than disciplining them by fear. At Camberley May was well-placed to influence the future elite.¹⁴⁹ Maj Caunter argued:

we cannot be wrong in ... encouraging individuality and initiative in our soldiers, these qualities are by no means antagonistic to, but, on the contrary, are complementary of that true discipline... which is based on mutual confidence between all ranks.

Caunter became Deputy Commandant Sandhurst in 1902 and was able to shape officer training.¹⁵⁰ Roberts suggested the direction the Army should take:

Discipline is as important now as it was then but self reliance is what is wanted, not the rigid discipline of the barrack square. Officers, [NCOs] and men must be encouraged to think and act for themselves.¹⁵¹

Roberts linked discipline, training and initiative, as well as the value of the LI system.

Improvements were made in the disciplinary system. In 1899 a committee, chaired and apparently instigated by Buller, had recommended that imprisoned soldiers were to be treated differently from civilian convicts. Successive Inspectors of Military Prisons introduced more education, military training and abolished unsatisfactory NCO-supervised Provost Prisons. In 1901 military prisons were brought under army control and specialist military staffs were established.¹⁵² In 1902 overall discipline was modified to add:

greater freedom, and to diminish the amount of time spent on fatigues... Permission has been given to abolish roll-calls... By these changes the soldier must, in future feel that more responsibility is thrown upon himself, and that his self-respect should be ... increased.¹⁵³

These modifications were achieved administratively rather than by changing the Army Act. They would have aided recruitment of better-quality soldiers, thus fostering

¹⁴⁹ *Retrospect* pp 70, viii.

¹⁵⁰ *The Campaign in the Free State and its Lessons* (1901), p 29.

¹⁵¹ FM Roberts 'The Army-As It Was and As It Is' *IPC LVI* (1905), p 3.

¹⁵² WO32/8734; Lt Col Garcia ... *Military Prisons 1901* (1902), pp 24-5, 59; Maj Clayton ... *Military Prisons 1902* (1903), pp 19-20; AO 241/1901. WO 32/18740-43 covers implementation.

¹⁵³ *Annual Report of the Inspector General for Recruiting ... 1902*, p 6. That a recruiting report makes these points, suggests that the Army was trying to raise entry standards.

initiative indirectly. The document suggests that improved disciplinary conditions could improve initiative. FW Kitchener modified discipline in his division, warning that:

[r]egimental restriction very often militates against individuality ... it is essential that soldiers should be encouraged to feel a sense of individual responsibility.¹⁵⁴

Connaught, the IGF and a Rifleman, recommended easing tight discipline and advocated that the Army study how civilian firms maintained it. He also suggested improving soldiers' conditions. He did not link his changes specifically to inculcating initiative, but the same report highlighted the topic. Connaught concluded:

I am not advocating anything that will militate against the preservation of discipline... but I consider with a better class to deal with, many of the rigid methods of the past might be modified, as in many cases they have been, to suit modern conditions.¹⁵⁵

In 1904-5 remission for good conduct was introduced; in 1906 soldier prisoners were to wear uniform rather than convict garb, which was reserved for serious offenders awaiting discharge. Also in this period soldiers were detained rather than imprisoned. The change was made in the Army Act 1907 in order to remove the stigma of imprisonment for offences which were military in character. Flogging unruly military prisoners was abolished. A committee considering military punishments showed a similar trend toward greater flexibility. It recommended that minor offences committed by recruits should not prejudice their later careers.¹⁵⁶ The Committee heard that recruits were now better educated and less prone to drunkenness. In the period the military penal ethos shifted from punishment to reformation focussed on training and education, recidivism reduced and assaults on staff became 'practically unknown.'¹⁵⁷

In 1909 COs' powers were increased in order to reduce the number of courts-

¹⁵⁴ Lt Col Hamnett 'Summary Awards in the Army' *ASCQ I* (1905), suggesting that COs' attitudes were changing; *ANG XLIV* (18/4/03), p 365.

¹⁵⁵ WO 27/491 'IGF Report 1905' pp 59-60, 208.

¹⁵⁶ Ibid 'IGF Report 1907' pp 85-6; WO 33/2953 'Report Co Military Punishments;' *USG 7/3/07* p 186.

¹⁵⁷ AFPs 50323 F15; WO 32/6872; AFPs 50323 F19 p 107; McPherson *Discipline* p 74. But statistics cited at Tables 7, 26&27 suggest that drunkenness was reducing at a slower rate than courts-martials, while entry-level education was still low.

martials and thereby heighten their deterrent effect. This would improve discipline, reduce paperwork and free time for training.¹⁵⁸ Better conduct meant that there was less need for coercion; soldiers could be trusted more, aiding extended-order tactics. But the Army did not adopt 'internal' discipline entirely. There were still many tough characters and taut 'external' discipline was necessary in some units. But Ian Hamilton considered:

the balance point of discipline has... insensibly shifted in the past ten years. ...[O]ur officers have definitely faced the new conditions and have made up their minds to seek discipline for the future in the effects of good example, sympathy and kindness, in ... traditions, in the maintenance of a high level of camaraderie ; in the intelligent comprehension by the rank and file of the why and the wherefore of an order and in their keenness to carry it out.¹⁵⁹

When Hamilton wrote this is unclear. If it was during his time as AG, it is important evidence of change. If later, it suggests that fundamental alteration had taken place, witnessed by an officer with overall disciplinary responsibility. It makes no claims for Hamilton's personal role and is consistent with his RCWSA paper. Brig Gen Haking later considered that:

The idea of turning a man into a machine, by means of strict discipline, and thus making him more afraid of disobeying orders than of ... the enemy... has long proved abortive. This method of training was only possible when infantry fought in close formation.¹⁶⁰

The origins of 'internal' discipline can be viewed as a continuation of the self-help and restraint which the Victorians saw as a sign of manliness.¹⁶¹ The Army had similarly stressed temperance and sexual restraint, especially in India where temptation was ever-present and families remote. Roberts had fostered the ATA when CinC there. Here it may be noted that the level of offences, particularly drunkenness, and VD remained relatively high despite such efforts. The ATA also promoted self discipline as

¹⁵⁸ WO 32/8701 'Minute DPS 13/11/09' pp 2-4.

¹⁵⁹ HamPs 15/1/36 pp 58-9.

¹⁶⁰ *Company Training* (1913), p 1.

¹⁶¹ S Smiles *Self-Help* (1859 reprinted 1986), p 19; S Smiles *Duty with Illustrations of Courage, Patience and Endurance* (1880). J Bourke *Dismembering the Male* (1996).

it was largely run by soldiers, albeit with officer supervision.¹⁶² However, this emphasis did not apparently affect the Army's handling of disciplinary issues or have a tactical dimension before 1900. Disease and alcoholism rendered men unfit to fight and therefore motivated the Army. But the stress on 'internal' discipline after 1902 related to the requirements of combat under the new tactical conditions and differed from the Victorian efforts.

In summary one notes a substantial improvement in discipline; why this happened cannot be conclusively proved, though education played a part. But it is also argued that the demand for initiative, the imperatives of dispersed combat and alterations in the exercise of command from imposed control to leadership contributed. Another element of the interrelationships postulated above had changed radically.

Conclusions

From 1897, especially after 1899, the rate of change towards initiative, 'internal' discipline and decentralised tactics accelerated. This coincided with experience of combat involving magazine rifles. These weapons enforced dispersion. Dispersed, more complex combat required better educated and trained soldiers capable of initiative. That soldiers' education certificates roughly doubled between 1903-1912, while courts-martials halved in the same period suggests that the Army had changed radically. Was this primarily the result of battlefield factors and the consequent need for initiative or the product of wider social factors? This cannot be conclusively answered; wider factors and altering mental attitudes were significant, but, with the exception of a few comments acknowledging education's effects on improving discipline, they are not mentioned. One also notes a generational shift of commanders and changes in the civil education and justice systems, but both are elusive as factors in causing change when compared to the tactical. On the recorded military evidence the most important cause

¹⁶² *ATA Report 1893-1895* (1895); Table 7

was South Africa, with Tirah its precursor.

Earlier this Chapter outlined interrelationships between initiative, tactics, training, education and discipline, all changed radically in the period. It is not possible to prove conclusively the other elements changed just because of the need to enhance initiative. But on the evidence deployed in this Chapter the basic motivating factor was that Infantry and to a lesser extent the other arms now had to fight in open-order. The switch towards initiative was incomplete in 1914, but the Army's prewar direction was clear. Tactically dispersed skirmishing, scouting and reconnaissance, dependent on initiative, were emphasised. Many saw training as the way to inculcate initiative. Similarly greater education was needed in dispersed, complex combat. Both officer and soldier basic training changed substantially with less drill and more intelligent instruction. These would have increased initiative. It is harder to demonstrate the exact link between disciplinary changes and initiative, but less coercive enforcement would have improved the latter. Furthermore the Army changed its administrative and pay systems to enhance initiative. This wide spectrum of means suggests how important it was to increase initiative. The rough period 1897-1909 saw profound changes in attitudes to initiative, discipline and training. This is not to argue that the results equated to current standards, but essentially the modern system of initiative and 'internal' discipline was established. Chapter 9 examines the contrast between the Army and industry. A journal summarised the changes:

fitness and efficiency off the barrack square are rightly considered of first importance. In former days ... efficiency was gained by constant adjutant's parades; the company officer was allowed little work in the training of his men; open order drill was as stereotyped as a march past; much more was thought of correct dressingthan in making use of cover ... [I]ndividualism had no place in the training of the infantry soldierNow....individualism is encouraged by every possible meansThis is really the great change which has come over the British Army.¹⁶³

¹⁶³ *BA LXXXVIII* (1912), p 368.

Chapter 8. The Russo-Japanese War

Down in the Infantry nobody cares;
Down in the Cavalry. Colonel 'e swears;
But off in the lead with the wheel at the flog,
Turns the bold bombardier to a little whipped dog.

Introduction

Kipling summarises the lessons of Manchuria; soldiers felt there were few for British infantry, cavalry colonels undoubtedly swore at Cossack inertia, but artillery was to be the arm most affected. This Chapter examines the firepower, mobility and protective lessons of Manchuria. It scrutinises the war's effects on siege warfare and general tactics. It probes Dr Towle's thesis, long regarded as the definitive assessment of Manchuria's influence on the British, arguing that his judgment that it had little effect on the Army requires modification. His deductions over-emphasise 1914-18, thereby obscuring prewar reasoning.¹ Chapter 9 analyses Manchuria's influence on doctrine.

This chapter argues that, though Manchuria's greatest tactical effect was on artillery, it confirmed to contemporaries that operational level manoeuvre was vital. This and other continuities from South Africa are at odds with those who have seen Manchuria through the prism of 1914-18.² These continuities explain why Manchuria had few unique effects on Britain, but they are significant in their own right. However, Manchuria influenced *FSRs*, reinforced British interest in human factors, modified the South African emphasis on tactical outflanking, though it did not lessen British stress on manoeuvre and reawakened interest in siege warfare.

Commentators felt that Manchuria had particular relevance for Britain as a predominantly maritime power was combating a mainly military one. Furthermore Britain might have to fight Russia, either because of the Anglo-Japanese alliance or

¹ *The Influence of the Russo-Japanese War ... 1904-1914* (KCL 1973), pp 382,385-6.

² *Ibid* p 16; Capt Liddell-Hart *The British Way in Warfare* (1932), pp 122-3. WS Marble *The Infantry cannot do with a gun less* (KCL 1998), p 18.

to defend India. With 2 regular armies fighting, modern artillery in action, rough numerical equality and more conventional tactics than in South Africa, there were many reasons for study. The Army made substantial efforts to learn, perhaps greater than for any other war which it has not fought, sending MAs to both sides.³

Manchuria inspired three British official histories and is unique as the only war in which Britain was neutral, but for which these works were written.⁴ The Army circulated war-bulletins to officers and translated many Japanese and Russian documents. The latter did not cease in 1905.⁵ Military journals reprinted many foreign articles on the war.⁶ Officers were ordered to keep war diaries and make appreciations aided by official lectures on Manchuria. Camberley and Quetta studied Manchuria intensely. Brooke took extensive notes and a CO lectured to his unit on the war. Japanese methods were used in training, a journal recorded British enthusiasm for Manchurian data, while several officially-sponsored competitions analysed its lessons.⁷ Kitchener, Rawlinson, Broadwood, Barrow and other officers toured Manchuria's battlefields. At least one guidebook described them, suggesting the degree of interest in the war. The Indian Staff College visited Manchuria in 1907 on perhaps the longest battlefield tour ever undertaken by a British staff college.⁸ Quetta continued to study Manchuria closely till at least 1913. All suggest that

³ Col Waters *Reports on the Campaign in Manchuria in 1904* (1905), p 3; Table 27.

⁴ *Official History of the Russo-Japanese War* (1906-1908), *Official History (Naval and Military) of the Russo-Japanese War* (1910-20), JS Corbett *Maritime Operations in the Russo-Japanese War* (1914-15).

⁵ *Notes upon Company and Battalion Tactics* translated GS, *JRUSI* LII (1908); *JRUSI* XLIX (1905), pp 680-5; FO 46/665; in 1907 the *JRUSI* published GS-translated documents.

⁶ Eg 'Infantry Combat in the Russo-Japanese War' *JRUSI* L (1906) from the French.

⁷ *ANG* XLV (1904), p 291; Maj Banon *The Situation in the Far East and the Events that have led up to it*. (Dublin 1904), p 1, instituted by the GOCinC to aid diarists; L/MIL/17/5/2276 p 30; BRPs 3/5; Lt Col Robson *5 Lectures on the Russo-Japanese War* (1904); CRMPs Biography pp 125,128, Letters, 11/8/07 & 15/8/07; *ANG* XLV (1904), p 819; Prize Essay 'Lessons in Modern Tactics ... from ... the Russo-Japanese War' *JUSII* XXXIX (1910).

⁸ Gen Barrow *The Fire of Life* (1942), pp 136-7; HQ India ordered the tour, Vincent, a wartime MA, attended; *Cook's Tourists Handbook to Peking, ... Mukden, Dalny, Port Arthur* (1910); Maj Austin *A Scamper Through the Far East* (1909), p viii; Maj Gen Rawlinson 'A Trip through Siberia to the Battlefields of Manchuria' *JLR* I (1910); *DALISCMBs* (Simla 1908); MMPs 4/1&2, Quetta's timetables in 1912-13 show much Manchurian matter. It is likely that Camberley remained interested.

Manchuria keenly interested officers and thus had potential to influence them.

There were also obstacles to learning. Russia was fighting at the end of a long logistic chain and therefore amassed forces slowly. This would not be the case in Western Europe. Contemporaries felt that this impugned some of the war's lessons. Russia's Army was seen as backward, possibly creating resistance to learning from them, while Japan did not have a major power's resources. Shrewd commentators felt that Japanese human factors were unique. Poor roads and mountains in Manchuria hampered mobility more than in Western Europe.⁹ Commentators assessed that this had reduced the pace of fighting; consequently they argued that some tactical features of Manchuria, particularly extensive entrenchment, were unlikely to recur in Europe. There combat would be at a higher tempo.¹⁰

Dr Towle argues that Britain should have learned more from Russia, blaming the tendency to concentrate on learning from the victor. But Britain and Russia were enemies, thus there was an incentive to learn about Russia's performance, this accounts for the considerable number of IA officers who served as MAs, and for Russia to restrict British access. MAs were carefully selected. Many had language or Intelligence skills, while several were veterans of the Boxer Rising.¹¹ More were sent to Japan, but the British had an entrée due to the Anglo-Japanese alliance.

Firepower

Artillery

Manchuria was the first war in which numerous modern artillery, some QF, fought. However observers had reservations about both sides' weaponry. Japanese field guns were technically inferior to the Russians', though better training offset this. Others viewed Russian field guns as not true QFs, though substantially ahead of

⁹ *DALISCMBs* p 75; *Waters Reports* p 51.

¹⁰ *VDPs* 69/74/1 p 31 citing the GS in 1909.

¹¹ Table 28. There were a high proportion of IA officers; the IA was naturally interested in Russia.

their Japanese or South African equivalents.¹² Despite these caveats, commentators generally recognised that firepower, particularly artillery, was becoming more important. Home, a Gurkha MA, commented:

The great impression... is the overwhelming effect of modern artillery fire... [U]nder modern conditions artillery is the decisive arm.¹³

General Gerrard, another MA, commented:

the days when infantry was the Queen of Battles have now passed away.... Artillery has now a preponderating influence.

That two non-gunners recognised this suggests wider appreciation of firepower's growing importance. This parallels South African lessons.¹⁴ *The Times* emphasised:

A feature of the campaign has been the overwhelmingly important part played by artillery.

Gen French, CinC Aldershot, urged gunners to study the Manchurian artillery reports, commenting: '[t]here can be no doubt... that the relative importance and power of Artillery ... have increased enormously.' Rawlinson, Commandant Camberley, concurred, citing artillery's ability to crush counterattacks. But most, including many gunners, still saw Infantry as the master arm. France and Germany also agreed with this historically-based assumption.¹⁵

Towle has detected variations between British MAs with the Japanese and those with the Russians, commenting that:

Conservative tacticians ... tended to accept the views of Col Hume and the rest of the observers with the Japanese. They played down the role of artillery and frequently argued against the use of covered positions and heavy guns.¹⁶

But Hume was not always as negative as Towle states; he did not argue against

¹² *BORs* II (1908), pp 567-8,570.

¹³ *BORs* III (1908), p 215; Table 28.

¹⁴ WO 106/38 Report 38 para7; Chapter 4. Coincidentally both men had started their careers as gunners but transferred to the IA. That they had transferred early on does not suggest inherent pro-artillery bias.

¹⁵ Col Cordonnier *The Japanese in Manchuria* II (1912), p 252; AFPs 50321 F25 p 151; Lt Col Kiggell 'The Counter-attack' (AMS 1905), p 16; Maj Jeudwine, Maj Sykes, Capt Robertson in separate 'Duncan Medal Essays' *PRAIs* XXXV (1908-1909), pp 154, 218,249. All were gunners or sappers.

¹⁶ Towle *Influence* p 105.

Indirect Fire nor criticise heavy guns per se, though feeling that Russian weapons were ineffective as they were mostly obsolete. Significantly Hume praised Russian 5.9" howitzers. These were modern German pieces; British opinion was to consider them the best German 1914-1918 weapon. Furthermore being howitzers they were likely to be firing Indirect. Here it is worth re-examining the characteristics of Indirect Fire. It depends on signals, which both sides were forced to improvise during fighting, and is slow when training for it is poor.¹⁷ There were thus sound reasons for gunners to have reservations about using Indirect Fire to support troops manoeuvring as time is generally critical then. Nor are variations between observers altogether surprising.¹⁸

Towle argues that the MAs with the Japanese underestimated Russian casualties from artillery and consequently undervalued its importance. However, the British would not suffer equally from shelling as their formations were much more extended than Russian ones. Moreover by 1907 the GS had circulated Russian data and Russian casualties from artillery were better appreciated.¹⁹ British reports of continental manoeuvres criticised dense formations, suggesting that firepower's effectiveness was understood. That Britain developed Artillery Formations after 1905 also weakens Towle's argument that artillery was undervalued. Their institution shows that British infantry appreciated artillery firepower.²⁰ It is impossible to prove that Manchuria inspired them, but that war saw infantry far more exposed to shellfire than South Africa. Brig Gen Pilcher's lecture,

¹⁷ Hume saw advantages to both howitzers and Indirect Fire, see fns 24&33 below; Chapter 4.

¹⁸ *BORs* II pp 610-11,604; 'After Mukden' *JRUSI* XLIX (1905),pp 694-5; Brig Bidwell *Gunners at War* (1970), p 99.

¹⁹ GS 'Some Tactical Notes on the Russo-Japanese War' (1906), p 12; Capt Vincent 'Artillery in the Manchurian Campaign' *JRUSI* LII (1908), p 28, eg the official *Notes upon Russian Artillery Tactics in the War of 1904-5 ...* (1907).

²⁰ Towle *Influence* p 107; *DALISCMBs*,p58; 'The Kaiser-Manover in Germany 1905' *JRUSI* L (1906), p 187; WO 27/493 'IGF Report German Cavalry Manoeuvres 1906' p 2; Glossary.

the first traceable reference to them, used much Manchurian data.²¹ Hume also commented:

[g]iven more careful training and better shrapnel, the Russian field artillery, even though weaker in number of guns, would have been a still more important factor.

The Russians were also in the middle of introducing a new field gun and British MAs appreciated that this weakness was transitory. Hume later emphasised the growing importance of artillery in supporting attacks. Neither piece of evidence suggests that MAs with the Japanese significantly undervalued artillery. Dr Towle also criticises Hume for attacking British teaching that infantry could not attack before enemy artillery was subdued. However, Hume was right to warn:

except under the most favourable conditions of ground, or with very great superiority in number or power of guns, it is practically impossible to silence an opponent's artillery if it be well entrenched.

Combat between 1915-18 confirmed Hume's point. British development of CB tactics took years, depended on scientific progress and, though eventually achieving preponderance, never silenced the German artillery completely.²²

That French and Rawlinson, both very influential, stressed artillery's effectiveness using Russo-Japanese data, suggests that Towle's argument that the British downplayed artillery after Manchuria is wrong. Furthermore the later British increase in divisional artillery contradicts him.²³ Clearly the new large divisions needed more pieces in view of their size, but, had the British felt that artillery was ineffective in Manchuria, it is unlikely that they would have agreed so large an increase.

²¹ 'Formations of Infantry in Attack and Defence' (AMS 1906), pp 3-5, using Vincent's data. *IT* 1911 p 111 describes such a formation, which was not in *IT* 1905. WO 279/9 pp 119-12 suggests the Manchurian influence and describes trials.

²² *BORs* II pp 582-3, 585-6, 608-9; Towle *Influence* p 106, citing *BORs* II p 619 and by implication pp 579, 617-8, Towle contradicts himself *Influence* p 135; *BORs* II p 617; Col Rawlins *A History of the Development of the British Artillery in France 1914-1918* (nd), p 86.

²³ Towle *Influence* p 108; Table 20.

Howitzers

British commentators were positive about howitzers, paralleling South African lessons and indirectly supporting Indirect Fire. Hamilton observed:

I cannot think of a single engagement between the Mo-tien Ling and Liao-yang where howitzers would not have been invaluable.

Others concurred, including Vincent, a dashing field-gunner, later a Quetta DS and cavalryman, who noted howitzers' ability to search dead ground. This suggests that RFA attitudes were changing, thus reinforcing Chapter 4's arguments. Hume noted howitzers' value at Mukden, while others reported heavy Japanese howitzers' destructiveness at Port Arthur.²⁴

Towle claims that Britain was slower in rearming with howitzers than Continental armies. This is surprising; the 4.5" Howitzer's introduction predated the deployment of its German equivalent.²⁵ Though South Africa inspired the 4.5", had howitzers failed in Manchuria, this might have prejudiced its deployment which occurred well after the Russo-Japanese War. Nor is there is much evidence of British criticisms of howitzers in Manchuria. Britain fielded 18 howitzers in each infantry division, the same number as Germany, while France did not deploy them below corps.²⁶ Significantly Towle does not cite French howitzer statistics in making his criticism. He also states:

As a result of [Manchuria], [gunners] came to regard the heavy howitzer both as more important than the heavy fieldgun and also as essential in any field army.²⁷

Siege experts had reached similar conclusions in the 1890s on their superiority to siege guns. There is also a technical nuance; heavy field guns differ from heavy guns used in the field. The British had the latter, the 60 Pounder, but not the former. The

²⁴ *BORs* II pp 604, 610-11; Capt Buzzard 'The Heavy Howitzer in Modern Warfare' *PRAIs* XXXII (1905-6), p 561; Chapter 4.

²⁵ Towle *Influence* p 124; DT Zabecki *Steel Wind* (Westport 1994), p 11.

²⁶ Table 30, RA Doughty *Pyrrhic Victory* (Cambridge 2005), pp 29-30.

²⁷ Towle *Influence* pp 129, 123.

standard 6" British heavy howitzer did not attend manoeuvres regularly and was not formally included in the BEF's order of battle. But the weapons speedily deployed in 1914.²⁸ However, their field training increased after 1904, though it is impossible to attribute this just to Manchuria. South Africa had shown their value.²⁹ The RA's philosophy of heavy artillery in the field emphasised guns, the Germans stressed howitzers, while France downplayed both types of heavy artillery. Headlam, the RA historian, viewed as an enemy of Indirect Fire, was convinced that Manchuria had improved the howitzer's reputation and raised the question of their allocation to infantry divisions.³⁰ But the logic of the organisation of large divisions demanded that howitzers were incorporated in them. They required resources immediately at hand to support manoeuvre speedily. Headlam is therefore probably wrong to attribute their allocation to divisions just to Manchuria. But Manchuria encouraged the formation of large divisions and reconfirmed 1899-1902's lesson that field howitzers were valuable but subordinate to field guns. Here British conclusions paralleled German ones.³¹

Indirect Fire

Indirect Fire was used more often in Manchuria than in South Africa. Its use there was controversial. Some MAs argued against it and historians have suggested that criticisms of Indirect Fire in Manchuria were severe. But conditions were adverse to it. Most weapons in Manchuria were guns and both sides' signalling was primitive, thus there were technical reasons why it would not be fully effective,

²⁸ *Siege Artillery Drill 1891*, p 62; Brig Gen Wolfe-Murray 'Do we require Field Artillery?' *PRAI* XXIX (1902-3); Col Stone 'The Heavy Artillery of a Field Army' *JRUSI* LII (1908), pp 925, 927, 932; Brig Gen Edmonds *MOFB 1914 I* (1922), p 424.

²⁹ Col Stone 'Heavy Artillery in the Field' *JRA* XXXV (1908-9), pp 1-2; Chapter 4; *GAT II 1906* p 5. However the IGF saw 6" Howitzers firing and felt that the question of them deploying with the field army should be considered, WO 27/493 'Note Connaught's visit Rhayader 1906.'

³⁰ Maj Gen Headlam *The History of the [RA] II 1899-1914* (Woolwich 1937), pp 178-9. Headlam was not biased towards howitzers. By rejecting a corps-based organization, it would be hard to see how else a short-range weapon could have been organised except by allocating them to divisions.

³¹ Maj Marton 'Heavy Artillery on the Modern Battlefield' *REJ* XVIII (1913), p 29; Table 31; A Clayton *Paths of Glory* (2003), p 33.

despite the fact that the Russians had developed its techniques prewar.³² Despite these drawbacks, some MAs felt Indirect Fire was needed. Hamilton felt that greater enemy firepower made cover for artillery: 'absolutely essential,' demanding Indirect Fire, while Gerrard remarked:

The present shrapnel fire with QF guns is such that no troops can face it in the open nor can artillery serve their guns under it. Indirect fire seemed to be the only practicable method.

That two senior non-gunner MAs recommended Indirect Fire suggests greater all-arms awareness of its potential. Hume saw some advantages of Indirect Fire, noting CB's ineffectiveness against hidden pieces. He also appreciated the danger of artillery moving under shellfire. The latter was an argument for Indirect Fire and weakens Towle's criticisms of Hume.³³ Vincent, also with the Japanese, was open-minded and spent more time in his RUSI lecture discussing Indirect Fire than any other topic.³⁴ Capt Thacker, the Canadian gunner with the Japanese, stressed both Indirect Fire and that Japanese artillery had generally supported their infantry well. Maj Archdale, a field gunner, touring Manchuria after the war, concluded: 'the primary lesson appeared ...to be the necessity of using indirect fire.' Dr Marble has reported numerous criticisms of Japanese artillery's support of infantry; the above evidence suggests that he is over-harsh.³⁵

Dr Towle states that opposition to introducing Indirect Fire came primarily from the other arms. In fact many gunners resisted it. Given that professional opinion generally saw artillery tactics as a purely gunner matter, it is hard to see the Army resisting the switch to Indirect Fire had the RA unequivocally endorsed it.³⁶ Nor does Towle appreciate that South African evidence supported its introduction and that its

³² C Bellamy *Red God of War* (1986), pp 30-3.

³³ BORS II p561; WO 106/38, Report 38 9/9/04, para 7; BORS II p578; BORS II, p 571.

³⁴ Vincent 'Artillery' pp 36-39.

³⁵ Marble 'Doctrine' p 93; HamPs 3/1/2, pp 14, 16 report criticisms of Japanese artillery.

³⁶ Towle *Influence* p110; Col Bailey *The First World War and the Birth of Modern Warfare* (Camberley nd); Marble 'Doctrine' pp 97-98.

use in training had increased after 1900. Maj Budworth, a horse-gunner, argued that Indirect Fire was a South African lesson confirmed by Manchuria; another tactical continuity. But Manchuria caused it to receive more attention in training.³⁷

RFA Guns and Ammunition

Britain had made important deductions from South Africa on future field guns, but had reservations on their correctness due to the absence of QFs and eccentric Boer artillery tactics. Manchurian data was used to validate the 18 Pounder's characteristics. Experts, using Manchurian data, re-examined whether it should fire HE.³⁸ The choice of the RFA's standard ammunition is significant as it suggests the Army's, or at least the RA's tactical assumptions on future combat. Selecting shrapnel shows that men in the open were the prime targets, thus anticipating manoeuvre *en rase campagne*. Choosing HE indicates that structures were the priority, foreseeing entrenchment and more positional combat. Towle argues that gunners, sappers and progressive infantrymen supported introducing HE, with conservatives opposed. He implies that the reactionaries won.³⁹ The choice of shrapnel is more defensible than he allows. In manoeuvre, logistics preclude massive destructive bombardments, while time limits entrenchment.⁴⁰ These factors made shrapnel effective for killing men in the open or neutralising trenches. Nor was the division of support as clear-cut as Dr Towle suggests. Many gunners opposed HE.

An influential RA committee had concluded after South Africa:

One of the most important lessons demonstrated [in South Africa] is the utter inefficiency as mankillers of common shell ... and the efficacy of good time shrapnel under similar circumstances.⁴¹

³⁷WO 27/503 'Training ... 1st Army Corps', p 2. French reemphasized Indirect Fire in 1905 AFPs 50321 'Training of the Aldershot Army Corps 1905' pp 150-1; 'Tactical Employment of Artillery' (AMS 1908), p 7; Gen Hamilton 'Training of the Troops during 1906' *JRUSI* L (1906), pp 1519-20, 'Training of the Troops during 1907' *JRUSI* LII (1908), pp 85-6; Chapter 4.

³⁸ AFPs 50314 'The New Field Gun Appendix B' pp 16-17.

³⁹ Towle *Influence* p 118; the MAs cited as supporting HE were infantry or cavalry, 2 opponents were gunners; Table 28.

⁴⁰VDPs 69/74/1 *The Supply of Munitions to the Army* (nd), p 31 citing GS comments made in 1909. The paper was written during the 1914-18 war.

⁴¹ WO 33/339 para 3; Glossary.

Marshall, Roberts' CRA, had decried HE at the RCWSA, despite many cavalry and infantrymen demanding it. Dr Marble also criticises the RFA for their obsession with shrapnel as their prime ammunition nature. Contrastingly Dr Towle states that gunners supported introducing HE. It is argued here that he has misread the evidence by stating that HE was the RA's preference. Some continental experts supported their selection of shrapnel, while a Manchurian veteran judged that HE had no anti-personnel effect.⁴²

Dr Towle assesses future artillery tasks and this naturally bears on his belief that HE ammunition was needed:

After ... Manchuria... most British gunners thought that their task was to pin down the enemy's infantry and to make holes in their trenches.⁴³

The RGA may have seen the latter task as a priority, though there were only 6 RGA batteries in the BEF, but is incorrect for the RFA whose guns, though not their howitzers, lacked HE. Even their howitzers had a sizeable shrapnel ammunition scale, as did the RGA's 60 Pounders, which, being guns, were less suitable for destroying trenches. Consequently if Towle's statement is accepted, the RFA's field guns, most of the BEF's artillery, had the wrong ammunition for a major role. In fact the RFA's main task was infantry support with men their prime target. For this shrapnel was lethal. Hume partly contradicts Towle:

Field artillery, though provided with [HE] and common shell, can produce little or no effect on good trenches, even when well supported by heavy guns.

Clearly there are qualifications of scale and duration of attack. Days of shelling from massed field guns on a small target would have produced significant damage, but a

⁴² Brig Bidwell and D Graham *Firepower* (1985), p 97; Glossary; LS Amery *THWSA* VI (1909), pp 483-6. *Appendices to Evidence RCWSA* (1904), pp 195-8; WO 106/38 & *BORs* III p 217. Hamilton and Vincent had doubts on HE's value, though Vincent reported the Japanese felt that the Russians should have used it, *BORs* I p 55; Capt Barrett 'The "Q" Club Prize Essay 1906' *JRUSI* LI (1907), p 805; Gen Rohne 'Optimism in the German Field Artillery' *JRUSI* XLIV (1905), p 522; Marble *Infantry*, p 19 wrongly states that shrapnel has no neutralising effect; Capt Soloviev *Actual Experiences of War* (Washington 1906), p 18. This work was available in Britain.

⁴³ Towle *Influence* p 134, he does not cite contemporary sources for this statement.

small army emphasising manoeuvre was unlikely to be able to afford the time or ammunition. But Hume saw HE as a valuable adjunct to shrapnel, as the latter had little destructive effect. Dr Towle criticises the British for not introducing HE, citing Continental armies' adoption of field gun HE, but British divisions had, unlike the French, HE-firing howitzers, while Germany's strategy based on offence meant that they might reasonably expect to have to shell fortifications more often than the British. Furthermore Continental field gun HE scales were small, while wartime experience showed that field gun HE shells were too small to destroy defences.⁴⁴

Inter-Arm Cooperation

As in South Africa the MAs identified infantry/artillery cooperation as vital to cover attacks due to increased defensive firepower. Dr Marble suggests that Japanese gunners were severely criticised for using Indirect Fire and consequently for providing poor infantry support. The evidence is not overwhelming; many MAs and commentators suggest that generally artillery support was good. Hume reported that some Japanese infantry abused their artillery, a phenomenon not unknown in other armies, but most: 'look more and more for the support of the guns.' Hume ended:

The way the Japanese artillery supports its infantry is admirable, concentrating fire on important points, firing over the heads of the attacking lines and keeping it up to the last moment.

South Africa had emphasised both the latter points. That the Japanese used overhead fire suggests that they were possibly firing Indirect and that Hume was more evenly balanced on the question than Dr Towle allows. Swinton, involved with the British *Official History*, felt that cooperation was better than in South Africa. British manuals continued to stress artillery/infantry cooperation down to 1914

⁴⁴WO 33/1518 p 373; *FAT (Provisional) 1912* p 218; *BORS II* p 611; Glossary; Stone 'Heavy Artillery' p 931; Table 25; VDPs 69/74/1 'Smith-Dorrien/von Donop 20/12/14.

suggesting continuity between South Africa and Manchuria.⁴⁵

Artillery Tactics

British commentators used Manchurian data to debate whether artillery should be massed or dispersed. South Africa had first raised the issue. MAs noted that the Japanese switched from concentrated batteries at the Yalu to dispersed, despite their primitive signalling. Hamilton supported dispersion, Gen Nicholson was undecided, but recommended that batteries should be able to communicate rapidly, implicitly recognising that dispersal might be necessary. Vincent stressed artillery communications and many commentators highlighted the value of telephones for artillery. Manchuria confirmed that dispersing artillery was advantageous but demanded good signalling. Dispersion would inevitably mean greater use of Indirect Fire.⁴⁶ Vincent made another deduction by stressing the need for a divisional CRA to control dispersed batteries. The Army did not permanently establish CRAs until 1908 and it would be wrong to claim that Manchuria was decisive in their establishment. The greater number of pieces in the large infantry divisions made them essential, while South Africa had demonstrated their value.⁴⁷

Dr Towle states that contemporaries first questioned artillery duels as a separate tactical phase after Manchuria. In fact South Africa had already shown that the weaker, defending artillery would reserve its fire, thus shunning duelling, until enemy infantry advanced. The Army rebutted Hamilton's criticisms of artillery duels in Manchuria by stating that *FAT 1902* did not mention them. But there was still debate on them as late as 1906. Later the Direct Fire artillery duel mutated into the

⁴⁵Vincent 'Artillery' pp 31-2; Marble 'RA' p 93; *BORS II* pp 617,578; Capt Dawnay 'Artillery and Infantry in the Final Stages of the Attack' *JRA XXXV* (1908-9), pp 51-2; MAs emphasised artillery communications eg WO 33/1518 pp 353, 374; Capt Swinton 'The Defence of a Position Upon Open Ground' *REJ IV* (1906), p 132; Gen Hamilton 'Training of the Troops during 1906' *JRUSI L* (1906),p 1521; Glossary.

⁴⁶*BORS II* p 562; Ibid pp 562-3, Ibid p 560; 'Artillery' pp 34-5; 'The Transmission of Orders and Information in War' *USM XXXI* (1905),p 523; Chapter 4; Glossary.

⁴⁷ Vincent 'Artillery' p 35; Chapters 3-4; WO 27/491 'IGF Report 1905' pp 23-4 urged establishing CRAs in divisions.

long CB struggle that was such a prominent feature of the First World War.⁴⁸ This, however, was based on Indirect Fire.

Mountain Artillery

Dr Towle states that: 'in 1903 the Mountain Artillery had finally been abolished in the British Army.' He does not account for Territorial mountain artillery.⁴⁹ Despite favourable Manchurian reports, mountain was, and for that matter remains inferior to field artillery in range and firepower. It was usually packborne, having higher cross-country but lower road mobility than wheeled weapons. Continental combat generally demanded field artillery's attributes and, in a period of stringency, reluctance to expand mountain artillery in Britain made sense.⁵⁰ But *CTrg 1905* was amended to emphasise mountain artillery's ability to support infantry closely in conventional warfare through its inconspicuousness and cross-country mobility. *CTrg 1902* had not mentioned this point which was clearly a Manchurian lesson.⁵¹ Also India formed more mountain batteries after 1904. But this increase cannot be ascribed just to Manchuria. They were essential to combat growing tribal firepower. The development of the 3.7" QF mountain howitzer after Manchuria again suggests that Towle's point is overemphasised.⁵²

Infantry Firepower

The British criticised both sides' marksmanship; Hamilton reported Russian reservists unable to sight their rifles and 70-man Russian volleys, contrasting them

⁴⁸ Towle *Influence* p 134; WO 33/1520 p 455 fn; Lt Col May *A Retrospect on the South African War* (1901), pp 126-8 suggests their obsolescence. But duels were seen in Manchuria, probably because of primitive tactics and poor communications, eg *BORS II* p618, compelled Direct Fire; Chapter 4; WO 27/491 'IGF Report 1907' pp 79-80; WO 27/503 'Discussion following RA Operations 26/8/04;' Gen Farndale *History of the Royal Regiment of Artillery* (Woolwich 1986), pp 147-9, 186-90.

⁴⁹ Towle *Influence* p130, this and his footnote 98 are ambiguous; Maj MacMunn *The Armies of India* (1911), p 180; Maj Knapp 'Pack Artillery and the Close Support of the Infantry Attack' *JRUSI LII* (1908), p 963.

⁵⁰ Maj Geddes 'The Tactical Employment of Pack Artillery: A Criticism' *JRUSI L* (1906), pp722-3.

⁵¹ *CTrg 1905 Amendments* (1907), p 13.

⁵² *LMIL/17/5/1617* p 294; WO 33/3013 pp 46,49. But the IGF criticised the fact that there was little mountain artillery in Britain, citing Manchuria, WO 27/491 'IGF Report 1905' p 23.

with Japanese independent fire. He felt that Russia had not studied South Africa's firepower lessons. The MAs generally felt that neither side exploited small arms firepower fully, though they reported machine guns' effectiveness. This was despite neither side having emphasised them prewar.⁵³ Monro, Commandant Hythe, highlighted their importance to the 1906 GS Conference, citing Manchurian data. Based on this, French centralised machine guns in 3 brigades, ordering their brigadiers to select a BMGO who was to train their detachments.⁵⁴ *MAT 1908* stressed:

The value of machineguns in every form of warfare has been and is steadily increasing; the fire effect ... will be of the greatest importance on battlefields of the future.⁵⁵

This does not refer to Manchuria directly, but that it made deductions on future wars suggests that experience from Manchuria was used. Later *MAT 1908* mentioned the Russo-Japanese War directly, recommending training extra machine gunners to replace casualties. Generally, however, commentators felt that in shooting and minor infantry tactics there were few lessons for Britain.⁵⁶

Mobility and Manoeuvre

South African operations were generally very mobile, contrastingly Manchurian combat was sluggish. Home commented: 'manoeuvring was apparently not practised.' Cavalry colonels and commentators alike were disappointed with the cavalry's performance. Britain had hoped that Manchuria would offer guidance on mounted tactics, but, as Lyttelton noted, these expectations were unfulfilled.⁵⁷ There were specific reasons; Manchurian terrain was generally adverse, part was mountainous, and agriculture hampered mounted movement elsewhere. Despite these

⁵³*BORs I* pp 152-3; Lt Col Bird 'Rifle Calibre Machinegun Tactics' AMS (1904), p 3; 'Russian machineguns at Liao-yang' *REJ I* (1905), p 219.

⁵⁴ Col Ovens 'Fighting in Enclosed Country' *JRUSI XLIX* (1905), p 532; WO 279/9 pp 122-3; WO 27/505 'Memorandum ... Machine guns' p 1.

⁵⁵ *MAT 1908* has a section on them. The IGF often mentioned them, WO 27/491 '1912' pp 69-70.

⁵⁶ Capt Sedgwick *The Russo-Japanese War on Land* (1906), p 155.

handicaps, commentators felt that Russia should have had a major advantage in its cavalry. This was more numerous, rifle-armed and had better horses than the Japanese. Japan had not stressed the arm before 1904 so its cavalry tended to avoid shock. Russian cavalry tactics were based on the US Civil War MI-style combat.⁵⁸ Towle cites McCullagh, who rode with Russian cavalry in Manchuria, on their poor marksmanship, concluding that they must have been trained for shock-only tactics.⁵⁹ This is logical but wrong. In Manchuria most Russian cavalry were untrained Cossacks, who, Gen Scobell, citing MA reports, assessed as being tactically equivalent to undrilled Yeomanry and inferior to them in character. Even Russians felt that their cavalry's training was poor. Despite these criticisms, non-cavalrymen stressed the arm's importance; Hume felt that:

A couple of divisions of cavalry with their complement of horse artillery would have made the defeat of the Russians [after Mukden] complete and overwhelming.

Two Indian Staff College RFA students concurred, suggesting that the point was not just one made by cavalrymen.⁶⁰

The MAs criticised the Russian cavalry for poor horsemanship, overloaded horses, inertia, insufficient machine guns, poor training, defective marksmanship and scouting. These repeated British mistakes in South Africa.⁶¹ British cavalrymen censured Japanese cavalry for lacking rifles, machine guns and horse artillery.⁶² This shows that British cavalry attitudes had altered since South Africa and it suggests continuity of lessons.

⁵⁷ *The Russo-Japanese War up to 15th August 1904* (1905), p 57; WO 279/9 p 9.

⁵⁸ Jardine felt terrain impaired cavalry mobility, *BORs* II, pp 535-6; Hamilton disagreed, pp 528-9; *Ibid*, pp 569,589; Gen de Negrier *The Lessons of the Russo-Japanese War* (1906),p 10; W McElwee *The Art of War* (1974), pp 172, 196-7 for the Russian cavalry's MI style tactics based on the US Civil War.

⁵⁹ *Influence* p 175; *ANG XLVI* (1905), p 54 claimed that Cossacks did no marksmanship training.

⁶⁰ F McCullagh *With the Cossacks* (1906),p277; *BORs* I p216. Maj Burton 'Cossack and Sowar' *JUSII XXXIII* (1904), p 134; 'A Neglected Warning in Russia' *CJ II* (1907), pp 217-8; 'Cavalry' *AMS* (1905), p 7. Jardine disparaged Cossacks, WO 33/1518 p 347; 'RUSSIA-Cavalry in the Present War' *JRUSI XLIX* (1905),pp 981-2; *BORs* II, p611; *DALISCMBs* pp 88,96.

⁶¹ Staff Col Zalesskij 'The Russian Cavalry in the War with the Japanese' *CJ I* (1906), p 320.

Towle argues that South Africa and Manchuria demonstrated the superiority of MI over cavalry tactics. Dr Badsey has criticised this general proposition, while Russian MI-style tactics cannot be regarded as having been effective in Manchuria. The Russians failed to exploit their superiority in cavalry and consequently in mobility. It is suggested here that the correct argument is not fire versus shock but manoeuvre against inertia. Here Hamilton has force:

My arguments are not directed against the sword as such but only against those who would train cavalry so that they would enter upon a field of battle thinking rather of where they may deliver a charge than of how they may employ their mobility. I have watched thousands of men trained on this system... sitting idle on their horses.⁶³

Historians have often focused on Hamilton's remark:

it would be as reasonable to introduce the elephants of Porus on to a modern battlefield as regiments of lancers and dragoons who are too much imbued with the true cavalry spirit to use fire-arms.

They have concluded consequently that all cavalry were obsolete; in fact Hamilton was criticising shock-only tactics. He later emphasised:

All the obvious tactical advantages commanded by the well-mounted soldier—such as ability to cross swiftly a fire-swept zone, moving rapidly to the flank or rear of the enemy, seizing a position far in advance of the army.⁶⁴

He noted that there were still fleeting opportunities for shock. Two of Hamilton's 3 tasks involved manoeuvre not shock. This suggests that British thinking on cavalry was developing towards operational level manoeuvre as Chapter 5 argues.

Many cavalrymen agreed with him. Furthermore mounted reconnaissance, increasingly tactically important, could not be conducted using MI-style tactics.⁶⁵

The British criticised both sides' cavalry for inertia, defensiveness and failure

⁶² Brig Gen Bethune 'The Uses of Cavalry and [MI] in Modern Warfare' *JRUSI L* (1906), p630.

⁶³ Towle *Influence* p167; S Badsey *Fire and the Sword* (Cambridge 1981), pp 348-51; *BORs II* pp 528-9.

⁶⁴ *HamPs* 15/1/31 p 12; Maj Gen Greenly *Russo-Japanese War-Cavalry Reports* (np nd), 'Report (35)' p 317; *A Staff Officer's Scrapbook I* (1905), pp 215-6; Greenly *Russo-Japanese* p 323.

⁶⁵ Eg Maj Gen Scobell 'Cavalry' (AMS 1905), pp 10-11; 'German Cavalry and Lessons of the Russo-Japanese War' *CJ II* (1907), pp 224,222. Doctrinally British MI did not reconnoitre mounted; there had been exceptions in South Africa; Chapter 5.

to exploit successes, though they recognised the Japanese disadvantages. They argued for greater manoeuvre. *CT 1907*'s emphasis on daring action may have been partly derived from the inert performance of cavalry in Manchuria.⁶⁶ British views on cavalry raids were influenced by a sluggish Russian mission, made without surprise, with poor protection and reliant on wheeled resupply. That wagons accompanied the raiders slowed their movement over country in which requisitions could have been levied. The raid unsurprisingly failed to cut vital Japanese communications. The Russians botched a chance for decisive manoeuvre.⁶⁷

British commentators condemned both sides' immobility. Haking remarked: '[n]either [side] have shown any power or capability of manoeuvre.' Haking, a Camberley DS, lecturing at the 1905 GS conference, probably reflected official thinking by deducing from Manchuria:

With our small army we should, therefore, be masters in the art of manoeuvring ... To do this effectively it is of the first importance that we should possess great skill in the handling of cavalry, of advanced guards and of outposts. We should be constantly practicing such operations, our junior officers should thoroughly understand both the theory and practice of such detachments, so they can act intelligently, ably and without fear ... of doing ... wrong. ... If we could free our officers of that fear we should have the finest army in the world.⁶⁸

Haking's link between initiative and manoeuvre again suggests continuity of lessons from South Africa. His use of 'theory' implies doctrine, and his point on tolerating mistakes suggests that training was changing as Chapter 9 argues. Col Kiggell criticised Japanese slowness, though recognising their logistic and geographic handicaps. He stressed that mobility was vital between evenly-matched forces. Many

⁶⁶ *CT 1907* p 187. There was also a reaction against *CT 1904*. Cavalry inertia in South Africa also contributed to *CT 1907*'s emphasis.

⁶⁷ Capt Knox 'Mischenko's Raid on Yinkow' *JUSII* XXXVII (1908), pp 82,84,87-8,152-3; Gen Hamilton 'Manoeuvre Notes 1/9/07' p 2.

⁶⁸ *Official History (Naval and Military) of the Russo-Japanese War II* (1912), pp 202,203-4,500-1,506-7; WO 33/2747 pp 35-6.

commentators argued for activity and manoeuvre in combat after Manchuria.⁶⁹ Such tactics did not necessarily involve shock action. They represented a shift towards operational level manoeuvre. Haking's recommendations can be seen as a forerunner of *MAT 1908* which similarly emphasised manoeuvre

Col Maude argued that Manchurian lessons on the need for heavy artillery and additional ammunition would, if implemented, delay embarking an expeditionary force.⁷⁰ Elsewhere he blamed indecisive Manchurian battles on: 'slow movement.' He argued that mobility determined victory; this view by an ex-sapper suggests that not all apostles of mobility were hippophiles. Col May, a gunner, argued similarly in CGS's presence.⁷¹ Grierson, when DMO, stimulated by Manchurian reports, criticised excessive British baggage as hampering mobility; this probably resulted in a committee which cut transport and impedimenta. The Committee cited Stonewall Jackson's campaigns as a reason for increasing mobility. Commentators condemned Japanese operational and strategic caution, insufficient cavalry, and sluggish pursuits, while postwar official reports emphasised that Japan was increasing her cavalry.⁷²

Protection

With one regular siege and periods when combat congealed into positional warfare, entrenchment was more extensive than in South Africa. Whether increased firepower or the slower pace of combat in Manchuria, caused by logistics and other factors, impelled such tactics is irrelevant here. British commentators noted the

⁶⁹ Gen Hamley and Col Kiggell *The Operations of War* (Edinburgh 1907), pp 380-1, 408; 'How Cavalry might have been used in the Russo-Japanese War' *CJ* II (1907), p 478; 'What Cavalry Should Learn from the Late Campaign in Manchuria' *CJ* II (1907), p 363; Chapter 5.

⁷⁰ 'Economic Army Reform' *CRev* XC (1906), p 218.

⁷¹ Lt Col Maude 'Mobility: Its Influence on Strategy' *JRUSI* LII (1908), pp 197,204, Clausewitz argued similarly, Chapter 9; 'The Employment of Heavy Artillery in the Field' *JRA* XXXV (1908-1909), p 21.

⁷² AFPs 50317 'Report Japanese Transport,' WO 32/7075 p 1; Chapter 4; Capt Holbrook 'The Russo-Japanese War' *USM* XXX (1904-05), p 623; *Official History (Naval and Military) of the Russo-Japanese War* III (1920), pp 716-8; *JRUSI* LII (1908), p 121.

change, but were divided on the cause.

Fieldcraft

MAs reported that Russian infantry were untrained in using cover and were thus vulnerable to enemy fire. It:

was heavy in manoeuvre and not trained to fight in extended order. The losses due to close formations were very heavy... After ... Mukden loose formations were practised,...[but] to the last ... the Russians had not learnt how to use ground and they still moved slowly presenting a good target.⁷³

Hamilton, with the Japanese, noted that:

The closeness of the Russian formations left nothing to be desired. The men were shoulder to shoulder, usually quite visible lying along the top of a ridge while their officers stood up with field glasses.⁷⁴

He reported that the Japanese tended to extend more as the war progressed adopting: 'South African' tactics. The Indian Staff College felt that Boer-style extension would have been more effective than the Russian close-order. That British MAs with both sides had clearly recognised Russian vulnerability to fire suggests that Dr Towle's point that the British had underestimated Russian casualties is overstated.⁷⁵

Observers argued that Russian soldiers, due to poor education and rigid discipline, were incapable of dispersed combat and individual fieldcraft, Col Monro emphasised both points at CGS' 1906 conference. These failings partly explain Russian difficulties with reconnaissance. MAs reported the Japanese stress on concealment and camouflage. But South Africa had sensitised the British to fieldcraft and concealment, another tactical continuity between the wars. Later Aldershot stressed the importance of studying ground, citing Manchurian lessons.⁷⁶

Field Defences

MAs carefully reported trench designs, praising good entrenchment and

⁷³ Capt Holman *The Russo-Japanese War Joint Report I* (1906), p 49. He served with the Russians.

⁷⁴ Maj Macomb 'The Russian Infantry Soldier' *JRUSI* L (1906), p 1167; *BORs* I p 152.

⁷⁵ *DALISCMBs* p 35.

⁷⁶ W Kirton 'With the Japanese on the Yalu' *JRUSI* XLIV (1905), p 271; WO 279/9 p 120; WO 33/1518 p 50; WO 27/506 'Training ...Aldershot...1907.'

excoriating exposed or poorly-dug trenches. That one critic was an Indian cavalryman suggests that arm's attitudes had altered since 1899. As combat continued, both sides appreciated field defences: 'more and more strongly.' Several MAs noted Japanese entrenchment during assaults and their increased carriage of entrenching tools. Agar's report devoted a section to both topics, emphasising the growth of firepower and the consequent need for defences. But South Africa had also stressed both points.⁷⁷

MAs highlighted the tactical importance of anti-infantry obstacles, particularly barbed wire combined with machine guns:

in almost every succeeding engagement the main difficulty to be overcome has arisen from these two creations of modern war.

South Africa had taught similar lessons, though, due to Boer reluctance to attack, their salience was less. Guided by both campaigns, Callwell foresaw that: 'that wire will.... be very extensively used' in future wars. An infantryman commented: 'Manchuria points to wire entanglements as being ... the best obstacle.'⁷⁸ Haldane deduced that sappers were needed to cut wire during attacks. He criticised *CTrg 1902*'s statement that it was impossible to entrench during attacks. *CTrg 1905* was later altered to reflect both lessons.⁷⁹

Manchuria reconfirmed the South African lesson on the need to hide defences. Observers reported careful Japanese camouflage and were highly critical of prominent Russian positions which were consequently vulnerable to artillery. Agar commented:

hardly sufficient importance has hitherto been attached by us to this most important matter of concealment, invisibility only being given fifth place in the

⁷⁷ *BORS II Reports* 39,40&41; *BORS I* pp 182,166; *BORS II* pp 641, 638-640

⁷⁸ Col Callwell *The Tactics of To-Day* (Edinburgh 1909),p 158; *BORS I* (1908),p 60; Maj Jennings-Bramly *The Execution of Infantry Entrenchments* (1908), p 55.

⁷⁹ *BORS I*, p226; *Ibid* p227. *CTrg 1902* did not reflect 1899-1902's experience; it probably meant formal entrenchment rather than hasty digging, see Chapter 6. For Haldane's original remarks, see WO 33/1518 p 118.

essential principles in the design of a fire-trench ... in the [MME].⁸⁰

Later *The Manual of Field Engineering* stressed:

The value of concealment cannot be over-estimated and every effort must be made to conceal the site of all earthworks... It must always be borne in mind that invisibility is often as valuable as cover itself.

It is not possible to directly link this change to Manchuria as South Africa had already stressed concealment, but the publication date of *Manual of Field Engineering* suggests that Manchuria probably caused this change. It apparently influenced new trench designs.⁸¹

Engineers

Engineers felt that Manchuria was more representative for their arm as most tasks involved combat. In South Africa most had been logistical.⁸² The Wood Committee, established to review the sappers, stated:

The general trend of modern warfare, study of the South African War... and also the reports of the [MAs] from [Manchuria] point to... the greater employment of field engineers on the modern field of battle... [and] an effective organisation for the quick transmission of information.

Here a major committee recognised continuity of lessons. The Committee felt that engineers should be increased, citing, based on Manchuria, their greater role in combat, siege warfare and manning both communications and new technology.

South Africa had also demonstrated the latter two tasks' importance. Gen French argued for RE expansion; later Britain increased engineers in infantry divisions from 1 to 2 field companies and wished to include more, but engineers were expensive as Dr Towle explains.⁸³ But this increase was at the expense of overall RE numbers in

⁸⁰ BORs II pp 641-2.

⁸¹ *Manual of Military Engineering* (1911), p 24; Suggested by Lt Col Heath who reproduced the new designs in his lecture 'Field Engineering in the Light of Modern Warfare' JRUSI L (1906). The plates show complex redoubts, very different from the designs used in South African field combat. *MME 1901 (Provisional)* saw redoubts as not very useful in war, emphasis on them in the 1905 edition suggests Manchuria's influence.

⁸² Eg Capt Wilson 'Field Engineers for Our Next War' REJ VI (1906), p 89.

⁸³ WO 33/6805 'Wood Co Report' p 6; Towle *Influence* p 164. Brig Gen Baker-Brown *History of the Corps of [REs] IV* (Chatham 1952), p 57.

the BEF. The Committee recommended that senior RE officers of divisions be given greater powers, and stressed the need for speedy formation-wide communications.

Both were also South African lessons. The British created a specialist Signals Service in 1912; this was an RE responsibility.⁸⁴ This was not just a result of Manchuria; Tirah and South Africa had demonstrated the importance of signals in dispersed combat, but the continuity of lessons is important. Manchuria also influenced RE training.⁸⁵

Positional and Siege Warfare

Dr Towle suggested that Britain should have adopted more positional tactics after Manchuria. He has criticised Repington's comment:

Fortifications are the invention of the Evil One and that an army that intrenches, (sic) except offensively, is lost. War is an affair of activity, initiative and manoeuvre; the trench and the parapet are the negation of all three.

But this was apparently directed at war's operational level, suggested by Repington's use of 'army,' rather than indicating his opposition to all tactical entrenchment. That Repington had also stressed manoeuvre immediately before and after the above quotation supports this argument. De Negrier shared Repington's concerns.⁸⁶ Lt Col Heath, a sapper psc who later served on the Siege Committee, argued that even elaborate defences could be outmanoeuvred.⁸⁷ Edmonds, another sapper, writing about a campaign also involving extensive fortification, concurred.⁸⁸ Col Agar, a sapper MA, felt that extensive entrenchment would be impossible in Europe; neither time nor labour would be available, but he stressed its value in slower-paced Manchurian combat. That a senior sapper MA argued thus suggests that not all critics

⁸⁴ Maj Priestley *The Signals Service in the European War of 1914 to 1918* (Chatham 1921), p 5.

⁸⁵ WO 27/505 'CRE Aldershot Memorandum on Field Engineering Manchuria.' Though limited to Aldershot, the garrison's prominence was likely to have caused further dissemination.

⁸⁶ *Influence* p 154; *ANG XLVI* (16/12/05), p 1181; *Influence* p 150 citing *The War in the Far East* (1905), pp 315,314-5,316. Gen de Negrier *Lessons* pp 54-7. Also WO 27/506 'Aldershot Army-Corps Notes on Field Engineering,' this had much Manchurian material.

⁸⁷ 'Field Engineering,' pp 304, 306,309,314-5.

⁸⁸ 'The Campaign in Virginia in May and June 1864' *PRAIs XXXV*(1908-1909), p 543.

of over-entrenchment were either reactionary or non-engineers.⁸⁹ Col Ferrier, Commandant SME, emphasised to an all-arms senior officers' fortification course the dangers: 'of fortified areas in which armies are liable to be trapped.'⁹⁰ His comment possibly suggests Port Arthur where a substantial Russian force was encircled. Ferrier was rather critical of the course's value but one student was impressed in retrospect.⁹¹ That such a course had been established suggests Manchuria's influence. Camberley felt that: 'MANOEUVRE is the ANTIDOTE of ENTRENCHMENTS (sic).'⁹²

Dr Towle argues that sappers generally advocated entrenchment and hence positional warfare. Here it is suggested that the division was more complex. Towle correctly identifies a number of junior engineers who supported such tactics. But some senior sappers appreciated that entrenchment was no ne plus ultra to manoeuvre.⁹³ Nicholson, the CGS, though an engineer and an ex-Manchurian MA, permitted *MAT 1908* and *FSRs 1909* to emphasise manoeuvre. Towle also argues that junior ranks, defying their superiors, prevented effective digging on manoeuvres. Here it must be stressed that the style of manoeuvres changed from the deliberate, positional Manchurian-based schemes, to highly mobile ones before 1914. It is hard to see Smith-Dorrien or Haig being powerless to force their juniors to dig while Hamilton noted that troops entrenched enthusiastically. However, French as IGF was worried:

I do not believe that instruction in the practical and thorough entrenching of positions receives adequate attention, though a few years ago it was a prominent feature of all our larger exercises.

⁸⁹ *BORS II* p 637. The similar GS opinion cited by von Donop may be due to Agar's influence. But Nicholson was also present and was far more senior.

⁹⁰ FEPs pp 15-4.

⁹¹ CAB 45/132 Birch/Edmonds 8/7/30. Birch was a horse gunner; he became a senior artillery commander and heavy artillery expert in the First World War.

⁹² ROBPs 1/2/10 'Notes on Strategy by Col Henderson...' 1912 Edition. Operations DESERT STORM and COMPASS confirm the point.

⁹³ Towle *Influence* p 14; Chesney, an ex-sapper, had also stressed manoeuvre, Chapter 5.

Consequently French set a TEWT for the REs of 1,2 and 3 Divisions involving the defence of a 4 mile position. Rather earlier Smith Dorrien had caused a Manchurian style position to be prepared and attacked. The Army Council noted that next *MAT* would emphasise entrenchment.⁹⁴

Port Arthur rekindled British interest in siege warfare, largely dormant since Delhi. Here it is emphasised that South Africa's sieges were blockades rather than conforming to Vauban's classic principles. Previously the RGA had practised siege gunnery, siege trains existed and sappers studied fortification, but these had little discernible army-wide impact. Port Arthur emphasised that sieges were a distinct possibility for Britain; that it supported naval operations strengthened the argument.

Dr Towle ignores the impact on Britain:

[t]he importance of Siege Manoeuvres has of late years been recognised by more than one Continental Power, and the want of technical skill shewn by the Japanese troops in their attack on Port Arthur, directed the attention of the English Military Authorities to the great necessity for the instruction of troops in siege warfare... It was thought that the day of mining and handgrenades were numbered. [Manchuria] has ...clearly demonstrated that this is far from...the case.⁹⁵

The 1907 Chatham siege manoeuvres resulted. These involved demolishing a fort and were on a considerable scale. But the report was clear as to why a major siege posed problems for Britain. It would demand at least 3 divisions, many batteries, as well as a multi-division covering force, and would last months. Here it is worth emphasising that Bloch had forecast that prolonged mass-warfare was economically and logistically impossible. No major state anticipated prolonged fighting in 1914.⁹⁶

⁹⁴ Ibid p 156; manoeuvres primarily exercise commanders and staff; timescales are curtailed, low-level tactics are less prominent. The GS were concerned at improving entrenchment on manoeuvres, WO 279/45 p 56, the problem was time and filling in trenches afterwards; 'Training of the Troops during 1906' *JRUSI* L (1906), p 1521. WO 279/48 p 26 stresses that British Infantry had many more digging tools than before. The IGF cited Manchuria, WO 27/508 'Inspector RE Report Aldershot 1904.' WO 27/508 'IGF Report 1910' p 5. There was not enough time on manoeuvres for extensive digging, while filling in trenches was slow and damage costly; Ibid pp 20-1.

⁹⁵ WO279/15 p 7.

⁹⁶ I Bloch *Is War Now Impossible?* (1899), pp xi, xxxii-xxxvi; Lt Gen von Freytag-Loringhoven *Deductions from the World War* (1918), pp 15-6.

A siege committee was established in 1908. Its work was based on Manchuria and the 1907 manoeuvres. It recommended publishing a manual of siege warfare. Ex-Manchurian MAs with experience of Port Arthur, drafted this work which was later subsumed within *FSRs 1909*. There it probably had a greater chance of influencing the other arms.⁹⁷ Manchuria influenced subsequent siege training and inspired the development of grenades, Bangalore Torpedoes and 9.2" Howitzers.⁹⁸

Human Factors

Initiative

British commentators were convinced that superior Japanese human factors were partly responsible for their victory. There was great British interest in them, perhaps implicitly recognising British failures in South Africa.⁹⁹ That the British had overhauled their treatment of initiative and discipline after 1902 was a further reason for study. Many contrasted Japanese initiative with Russian inertia.¹⁰⁰ Hamilton commented: 'our allies are warlike ... by tradition; and upon patriotism... their government has been careful to graft initiative, quickness and intelligence.' He linked these qualities to Japanese education. Hamilton criticised Russian frontal close-order attacks: '[n]ot even their companies still less their sections or individuals seemed to show much flexibility, dash or initiative.' He censured Russian failures to use ground, describing their volleys as: 'the negation of individualism and wide extensions.'¹⁰¹ Col Waters thought that the Russians had problems adopting modern tactics due to their: 'lack of initiative.'¹⁰² French stressed to the Aldershot Command that human factors were vital in successful combat, citing the Japanese as an

⁹⁷ WO 163/12 'Report IGF 1906' p 56; WO 33/2986 & 33/2987.

⁹⁸ WO 33/2986; Lt Col Sandes *The Indian Sappers and Miners* (Chatham 1948), p 446.

⁹⁹ GS *Some Tactical Notes on the Russo-Japanese War* (1906), p 1; Maj Gen Colville *The Allies* (1907).

¹⁰⁰ Eg 'Chasseur' 'A Study of the Russo-Japanese War II' *BWM CLXXVII* (1905), p 296; Holbrook 'Russo-Japanese War' p 605.

¹⁰¹ Gen Hamilton *A Staff Officer's Scrapbook I* (1905), pp 10-11, 16-7, 256-7, 113.

¹⁰² *Reports on the Campaign in Manchuria in 1904* (1905), pp 3, 133.

example. Maj Bird, a Quetta DS, criticised Russian training, remarking that: 'individual initiative [was] discouraged.' Col Ross, a Camberley DS, criticised the Russian Viceroy who: 'stamped out initiative, and thereby destroyed all offensive spirit.'¹⁰³ These criticisms by two able middle-ranking officers suggest the Army's trend of thinking. Repington stressed the imperative need for: 'independence, initiative and intelligence,' which he felt Tsarism had repressed. Defective human factors had impeded the Russian ability to manoeuvre.¹⁰⁴ Maj Maurice, later DMO, praised Japanese soldiers' qualities and their army's training, contrastingly the Russians were: 'quite incapable of thinking for themselves.'¹⁰⁵ In a work translated and edited by serving British officers, Kuropatkin, the Russian CinC, condemned Russian officers and soldiers' poor initiative and recommended urgent improvement.¹⁰⁶ The GS circulated an article by Capt Degtyarev, a Manchurian veteran, recommending low-level initiative.¹⁰⁷ Others maintained that the Russians were unable to adopt open-order tactics due to their inertia, comparing: '[i]ntelligent' Japanese soldiers with their: 'stupid, cumbrous and ill-led' adversaries.¹⁰⁸ *The Quarterly Review* commented that: 'the necessity for education, personal initiative, and intelligence has been equally proved by [South Africa and Manchuria].' This is another example of contemporary parallels between the two wars.¹⁰⁹

The above evidence suggests that British interest in initiative had not declined since 1902. All were effectively arguing that the Russians were incapable of dispersed, modern tactics due to their defective human factors. Dr Towle argues that

¹⁰³ WO 27/503 'Training 1st Army Corps' p 2; *Lectures on the Strategy of the Russo-Japanese War* (1909), pp 15-6; *An Outline of the Russo Japanese War* (1911), pp 147,442.

¹⁰⁴ *Far East* pp 314-5. made immediately before commenting on entrenchment, fn 86 above.

¹⁰⁵ *Cambridge Modern History* XII (Cambridge 1910), pp 584-5. FB Maurice wrote this section.

¹⁰⁶ trans Capt Lindsay ed Maj Swinton *The Russian Army and the Japanese War* I (1909), pp 227-8.

¹⁰⁷ 'Notes upon Company and Battalion Tactics' *JRUSI* LII (1908), p 66.

¹⁰⁸ JM Price & 'Miles' 'Mukden and After' *MR* LXXVII (1905). Gen Lyttelton concurred, WO 279/9 p 129; FHE Cunliffe 'Some Causes of the Japanese Victories' *CHM* XVIII (1905), p 770; Col Phillpotts 'Some Lessons from the Russo-Japanese War' *JRA* XXXIII (1906-7), p 164.

¹⁰⁹ 'The War in the Far East' *QR* 202 (1905), p 304; Maj Kenjiro 'The New Japanese Infantry Training...1906' *JRUSI* LI (1907), p 714.

British infantry tactics regressed after Manchuria. This is examined later but what must be stressed here is that the contemporary British emphasis on human factors was essential for modern, dispersed tactics. Manchuria had reiterated the importance of initiative.¹¹⁰

Training after 1905 continued to emphasise initiative. Col Macartney-Filgate described imaginative scout training, designed to develop initiative, based on Manchuria. Brig Gen Bloomfield's lecture 'Modern Warfare and Individual Initiative' cited many Manchurian and South African examples. Bloomfield linked firepower and extended battlefields, deducing that on them: 'individual intelligence became absolutely necessary.'¹¹¹ The Japanese stress on initiative influenced scout training, while the Pachmahi Musketry School instilled initiative on Japanese lines. Unfortunately the article did not describe their methods, but that a major school stressed both initiative and the Japanese example suggests that Manchuria was influential.

Patriotism and the Japanese

The Japanese example encouraged the cultivation of patriotism in soldiers. Capper, Commandant Quetta, stressed this and British manuals from 1905 accentuated it.¹¹² *CT 1907* emphasised:

The soldier must be given a far higher aim than that of merely satisfying ...the drill instructor. He must be encouraged to feel that in perfecting himself as a fighting man he is preparing to take his part in furthering the aims of his country... Among soldiers so trained, individuality and self-reliance can safely be developed without any fear of sacrificing discipline. The strongest form of discipline in an army is that which comes from the conception of duty in its highest form which is the spirit of loyalty to King and country.¹¹³

¹¹⁰ Towle *Influence* pp 84-5; Capt Cunningham *Changes in Training and Infantry Formations* (Dublin 1911), p 13.

¹¹¹ 'Manchuria in the Mourne Mountains.' *CHM XXVI* (1909). It also included Peninsular LI experience; *USG* (18/1/06), p 45.

¹¹² *Scouting and the Training of Scouts in Peace* (Dublin 1907), pp3,5,8-9; Col Skinner 'Fire Discipline' *AR II* (1912), pp 458,462; CPs 2/4/1 'Memoir for Junior Division-Lecture' 1908 pp 2-4.

¹¹³ *CT 1907* p 18.

This quotation analyses 'internal' discipline well. *CT 1904* was less emphatic, suggesting that the Japanese Army and Manchuria had caused the change. Though it is impossible to prove Japanese influence directly, but when comparing these sentiments with Capper's remarks on patriotism, Maj Bannerman's lecture 'The Creation of the Japanese National Spirit,' Diosy's lecture 'The Spirit of the Armed Forces of Japan' or Repington's 'The Soul of a Nation,' the linkage is strong. Other manuals stressed patriotism, suggesting the shift towards 'internal' motivation argued in Chapter 7.¹¹⁴

It may be objected that both the press and schools had promoted patriotism heavily before 1899. Scholars have analysed both contemporary attitudes to and the efforts to instil it. But they have not cited official efforts to promote patriotism in the Army. The scholarly consensus is that patriotism was reasonably widespread in those classes which furnished the bulk of officers and soldiers. Furthermore the rush of volunteers in 1899-1900 suggests no lack of patriotism.¹¹⁵ Baynes argues that patriotism was a deep-rooted but undemonstrative element in most officers and to a lesser extent in soldiers.¹¹⁶ Had a lack of patriotism been perceived as a problem in South Africa, and there is no evidence of such attitudes affecting combat, it would have been logical to have used *CTrg 1902* and *IT 1902* to start inculcating it.¹¹⁷ It is of course possible to argue that there would have been a lag before implementation, but the fact that *CT 1904*, a major manual, emphasised patriotism far less than *CT*

¹¹⁴ *PRAIs XXXII* (1905-6); *The Times* 4/10/04, Repington *Far East* Chapter XXXIII; *IT 1911* stressed patriotism and morale, pp 1-2, *IT 1905* issued on 1/2/05, effectively before Manchuria's lessons were digested, has was far less emphatic than the former.

¹¹⁵ M. Blanch, 'British society and the war' in ed. P Warwick *The South African War. The Anglo-Boer War 1899-1902*, (1980), pp 216-7, 230-1, R Price *An Imperial War* (1972) and R Samuels *Patriotism* (1989), this work written after the Falklands War contains remarks that suggest a lack of detachment.

¹¹⁶ Lt Col Baynes *Morale* (NY reprinted 1988), Chapter 10. The work is secondary and has defects, but it is, however, the only detailed analysis of attitudes of soldiers in the Edwardian period and was based on research with veterans.

¹¹⁷ General Viljoen *My Reminiscences of the Anglo-Boer War* (1902), p 519 praised British and decried Boer patriotism. He had been a senior Boer commander. Henderson praised the troops' patriotism, *The Science of War* (1905), pp 421-2.

1907 did, suggests that the Russo-Japanese War was the main reason. The Japanese provided a formidable example of patriotism, initiative and 'internal' discipline. This naturally appeared very relevant to inculcating these qualities, demanded by manoeuvre-based tactics, in British soldiers. The second point of interest is that the Army even made an official effort. Generally the British attitude to the official fostering of patriotism is well illustrated by Kipling's: 'Jelly-bellied Flag-flapper.' Here it must be emphasised that individual officers and units probably encouraged patriotism before 1904, though the evidence is poor.¹¹⁸ After Manchuria the Japanese were often cited as an example.¹¹⁹

Professor Travers argues that the British overemphasised morale and determination in 1914, though their doctrine was more restrained than the French, but his criticisms are somewhat overstated. Morale remains a principle of war, human factors are vital in manoeuvre warfare and, given the radical alterations in the British treatment of initiative and discipline, their interest in Japanese personnel qualities is defensible, being related to 'internal' discipline and open-order tactics.¹²⁰ It may also be added that, despite far greater casualties and a far more testing combat-environment, the Army in 1916-18 did not suffer as large a dip in morale as occurred between 1941-2. How far its fostering of human factors before 1914 sustained morale in the grim period 1915-1916 is remain a matter for further research. But on the evidence available here, the Army was probably right

¹¹⁸ R Kipling *Stalky and Co* (1899), pp 211-15. It may be noted that the Chancellor of the Exchequer's promotion of Britishness has equally failed to move the nation, *Times* various dates May-June 2007. The use of fiction may be deemed inappropriate but Kipling who had excellent links with the Establishment and Army has considerable credibility and was writing in the period.

¹¹⁹ Col G Poignand 'A Plea for Education in Patriotism and Home Defence' *JLR* I (1910), p282.

¹²⁰ *The Killing Ground* (1990), pp 43-4. R Leonhard *The Art of Maneuver* (Novato 1991), p 139 suggests the importance of human factors in manoeuvre warfare.

to emphasise human factors before 1914.¹²¹

Patriotism, Initiative, the Boy Scouts and Japan

The creation of the Boy Scout movement gives an interesting sidelight on a number of issues with which this Chapter examines. The Scouts grew out of Baden-Powell's manual *Aids to Scouting* which was spontaneously used by teachers, leaders of organisations such as the Boys' Brigade and private individuals to train youths from 1900. Allenby's governess used it to teach his son. She had been instructed in its educational value at her training college.

It would be wrong to argue that the development of the Boy Scout movement was a planned top-down process, nor was it entirely military, though Baden-Powell used much military terminology early on. Then he wished to use 'corporal' and 'adjutant' to designate subordinate scout leaders. The Army called their leaders of reconnaissance troops: 'scoutmasters,' like the Scouts. Baden-Powell's programme at Brownsea Island showed a heavy military influence, while his stress on training in living in rough conditions was an important South African lesson. He took his group at Brownsea out: 'on duty as "night picket"' and let them bivouac by patrols. His programme there was based on the following:

Day 1 Duties, orders. Day 2 Campaigning, including cooking, health, camp resourcefulness. Day 3 Observation. Day 4 Woodcraft including stalking. Day 5 Chivalry including: 'Code of the Knights.' 'Patriotism,' 'Loyalty to King, employers and officers.' Day 6 Lifesaving. Day 7 Patriotism incorporating the Services, also marksmanship, History and Empire, duties as citizens. Day 8 Games for the above.¹²²

¹²¹ It is hard to make direct comparisons and a large number of factors have to be taken into account when assessing morale in the two World Wars. The British Army in 1941-2 had suffered a series of humiliating defeats for which there was no equivalent in 1914-18. The Depression, the aftermath of 1914-18 and criticisms of the Army undoubtedly had weakened morale. Boredom, separation from families who were in many instances more exposed to danger than soldiers provided a worse basis for morale than was the case in 1915-16. D French *Raising Churchill's Army* (Oxford 200), p 130, C Duffy *Through German Eyes* (2006), pp 121,328. Further it can be suggested that the combat environment in 1940-1 with tanks, aircraft attacking in depth was worse than the stresses that the German artillery and machine guns inflicted between 1914-18, despite the fact that the latter caused heavier casualties.

¹²² P Everett *The First Ten Years* (Ipswich nd), p 13. Everett was closely associated with Baden-Powell in the period and the summary above which precises Everett's quotation appears to have been taken from a contemporary document.

The Day 5 and 7 programmes suggest the Japanese influence. Bushido roughly interpreted equates to 'Code of the Knights.' Nitobe, a contemporary Japanese scholar, used knight as a synonym for samurai and chivalry for Bushido. Baden Powell explicitly acknowledged the Japanese in *Scouting for Boys*.¹²³

Jeal considers that Baden-Powell's emphasis on initiative and independence was inconsistent with his stress on discipline.¹²⁴ This is perfectly explained by the fact that the Army was switching to 'internal' discipline fostered by patriotism, teamwork and comradeship. Baden-Powell stated that:

Scout-craft includes... resourcefulness, discipline, self-reliance, unselfishness, physical activity...loyalty and patriotism.¹²⁵

These were exactly the qualities which the Army was now seeking to inculcate in its soldiers. That Baden-Powell selected as the basic element of his organisation, the scout, the most valuable type of Infantry and Cavalry private soldier is significant. Many of the elementary games which he used had military themes or were based on military methods. The movement developed fitness, critical in view of the revelations of the poor average physique that recruiting for South Africa had revealed.¹²⁶

The Scout movement is an interesting synthesis of tactics, South African and Japanese influences mixed with civilian aspects. Howell, 2ic of the 4th Hussars stressed the need to arouse the Boy Scout spirit in the unit and in one Kitchener battalion the CO selected his JNCOs from ex-scouts.¹²⁷

General Tactics

The British admired Japanese human factors but criticised their tactics, noting that they later started to adopt South African ones. MAs reported with a touch of

¹²³ I Nitobe *Bushido* (NY 1905), pp 4-4,6-7; *Scouting for Boys* (Oxford reprinted 2004), p 212.

¹²⁴ T Jeal *Baden-Powell* (1989), pp 381, 413.

¹²⁵ Lt Gen Baden-Powell *Scouting for Boys. An Explanation* (nd), p 1.

¹²⁶ Lt Gen R Baden Powell *Scouting Games* (1910); *Memorandum by the Director-General, Army Medical Service, on the Physical Unfitness ...[Recruits]* (1903) (Cd 1501).

¹²⁷ HowPs 8/4/1 Letter 16/12/13.

schadenfreude the failure of close-order German tactics in Manchuria. Thus British interest was mainly directed therefore at the higher tactical levels. Roberts' tactics in 1900 had been largely based on outflanking and this was reflected in post-war training. A brigade attacking an unentrenched ½ battalion frontally was adjudged defeated.¹²⁸ Here it must be stressed that, though outflanking was then as it is now tactically advantageous, it is often unachievable. Manchuria renewed emphasis on tactically frontal attacks. Paradoxically this may have aided manoeuvre.¹²⁹ Smith-Dorrien conducted a 3 day frontal assault on an entrenched Manchurian-style position. A similar live-firing exercise occurred in Ireland which also involved artillery clearing barbed wire. In 1905 French outlined forthcoming training involving the:

practice of great attacks which require several days to initiate, mature ... and bring to a successful conclusion. I mean the employment of such tactics as were used by the Japanese.¹³⁰

The British had noted that terrain might, as at Nan-shan, compel frontal attacks and that very extended lateral lines restricted manoeuvrability. The Army circulated the Japanese *Opinions with regard to the Attack of Entrenched Positions*, while Maj Home wrote a long article 'Reflections on the Tactics of the Attack' outlining deliberate, methodical assaults on positions. That Home, an MA with the Russians, became a staff officer at Aldershot in April 1905 weakens Towle's case that MAs with the Russians and their reports were ignored. But it would be over-stretching the evidence to suggest that Home decisively influenced Aldershot training in 1906. French was clearly using MA reports. Similarly Col Waters lectured to Camberley in

¹²⁸ *Notes for Guidance on South African Warfare* (1900); WO 279/9 p 116; Maj Gilbert 'The Battle of Kinchau' *JUSII* XXXIII (1904), p 238. The ratio of relative strengths 8:1 for the attackers exceeds present norms generally taken as 3:1.

¹²⁹ LMIL/17/5/1811 pp 57-8; 'Fantassin' 'Practice as Opposed to Theory...' *USM* XXXVI (1907), p 203. The Glossary explains the paradox.

¹³⁰ Brig Gen Ballard *Smith-Dorrien* (1931), pp 120-1, though secondary it is a factual statement; 'Combined Training in Ireland' *ANG* XLVI (1905), p 898; AFPs 50321 'Training Aldershot ... 1905' p 153.

1905.¹³¹ Similar deliberate tactics were used in the 'Manchurian attack' exercises held throughout Western India; these consisted of sapping towards objectives.¹³²

Large-scale, deliberate frontal attacks posed problems for a small, regular army. They would be costly in casualties. Far more artillery would be needed, thus impairing mobility and complicating logistics. Such tactics would have locked the British into positional, attritional combat in which numbers would ultimately prevail. They would have clashed with the BEF's semi-independent role which demanded manoeuvre. French retrospectively criticised his failure to foresee positional warfare, but for a brief period he clearly had. The rationale which drove the Army towards manoeuvre was implicit in its size and likely mission.¹³³

Capper, writing about Manchurian night attacks, criticised positional, methodical operations, citing the Spion Kop campaign as an example. Capper saw night operations as a means of avoiding such deliberate tactics and Manchuria influenced night training, instanced by the Indian publication and *FSRs 1909*'s Chapter 9.¹³⁴ Night operations were a means of defeating defensive firepower and gaining surprise. Manchuria and South Africa inspired searchlight trials and the establishment of a searchlight company. Commentators were influenced by Manchuria but also foresaw that evading aircraft observation would make night operations more attractive.¹³⁵ Later the Army issued *Elementary Training in Night Operations 1911*. This summarised existing material but its production suggests the importance that the Army attached to night combat. The IGF scrutinised night

¹³¹ Glossary; *JRUSI LI* (1907); *Tactics* pp12,1; *JRUSI LII* (1908), pp 1633,1638; fn above; *QAL 1908* p 10a ; IPs Diary 7/4/05.

¹³² L/MIL/17/5/1810 p 60. Capper deprecated them for teaching over-caution.

¹³³ J Gooch *The Plans of War* (1974), p 289.

¹³⁴ FM French *1914* (1919), pp 11-12; EPs 8704-35-17; WO 106/180 p 3. Here Capper meant the slow move and methodical operations before the assault, see *SKDs* (1902); *DFANAMW* (Simla 1908); Lt Col Haldane 'Night Attacks' *BORs II* p 520.

¹³⁵ Col Dawkins *Night Operations For Infantry* (1910), pp 1-2. Gen Haldane *A Soldier's Saga* (1948), p 271 trained his brigade extensively at night, particularly in withdrawal.

training.¹³⁶ This was another link with South Africa.

Headlam argued that Manchuria modified South Africa's lessons and made British tactics better suited to European warfare.¹³⁷ This is a retrospective judgement, but Headlam, criticised for his opposition to Indirect Fire, partly a Manchurian lesson, would appear unprejudiced here. Dr Towle criticises Kiggell's comment that 1870 was a surer model for British tactics than Manchuria, implying mental rigidity. But it is arguable that 1870, which saw manoeuvre, doctrine and initiative used at the operational level to defeat the French rapidly, may indeed be seen as superior to a war causing revolution and bankruptcy.¹³⁸ Kiggell, introducing his edited version of Hamley's *The Operations of War*, emphasised that tactics were constantly changing; he later analysed Manchuria and made a case for why combat there was abnormal and why manoeuvre on the lines of 1870 was still possible. It may be argued, though not conclusively proved, that Kiggell, an educated soldier, was commending 1870 for its operational-level manoeuvre, rather than the continued validity of its minor tactics. Here one faces the problem that contemporaries used tactics to describe everything from section-level combat to the operations of an army corps.

The British were very critical of Russian failures to persist in combats by committing reserves and for irresolution.¹³⁹ Here one can detect a parallel with South Africa, where Buller's failure to force through attacks and Roberts' avoidance of casualties were criticised. No British contemporary commentator made this point, career considerations would have made such criticisms risky, but stinging denunciations of Russian irresolution and praise for Japanese tenacity implicitly

¹³⁶ WO 27/505 Capt Holloway '...Night Operations' p 1; Gen Hamilton 'Remarks... on Training 1908' *JRUSI* (1908), pp 1549-50; WO 33/2967, the Committee's work was based on Manchurian, South African, trials and European evidence; L/MIL/17/5/1617 Appendix 13 p 78; Baker-Brown *REs*, p 292; WO 27/491 'IGF Report 1907' p 7.

¹³⁷ Maj Gen Headlam *The History of the [RA] II 1899-1914* (Woolwich 1937), p 151.

¹³⁸ Towle *Influence* p 18.

¹³⁹ Hamley & Kiggell *Operations* pp v, 403-4, 376; *Home War* p 17.

criticised British performance in 1899-1900. Here one can speculate that South Africa and Manchuria helped to foster the over-determination in attack and retention of even unfavourable terrain often seen between 1914-1918.

Dr Towle sees the reports on infantry tactics as divided between progressives and conservatives, suggesting that tactics regressed after 1905.¹⁴⁰ His argument is largely based on the question of extension between men. Extensions in 1899-1902 were abnormal, being up to 30 paces between men. These strained the ability to control and massively exceeded near-current British norms. At higher levels brigades and divisions deployed across frontages far exceeding European norms. Even extensions post-1902 ranged from 6-20 paces between men.¹⁴¹ The reasons for such over-extensions were the very open terrain and Boer reluctance to counterattack. Gen Hutton, a tactically progressive rifleman, had already queried them, while Hamilton, not tactically reactionary, commented:

Nothing in the war in the Far East justifies the idea that vigorously defended positions can be taken by thin lines of skirmishers.

Hythe's trials discovered that closer intervals were feasible without undue casualties. Hamilton noted that over-wide lateral extensions hampered manoeuvre, arguing that they had become a South African fetish.¹⁴² This suggests that Towle's argument is simplistic. Indeed reducing lateral extensions may enable depth to be increased, thus enhancing manoeuvrability. Hamilton argued thus, though he also warned that lateral intervals could not be contracted further.¹⁴³ Later Capt Cunninghame, a GS officer, advocated less stereotyped tactics based on greater depth. Such tactics would have increased manoeuvrability. They depended on low-level initiative. The final

¹⁴⁰ Towle *Influence* pp 76-7.

¹⁴¹ Infantry in the late 1980s deployed roughly 10 yards apart. *MAT 1908* pp 5-6 emphasises the difference between tactical and formation extensions and the dangers of over-extended formations.

¹⁴² HuPs 50086 Hutton/Wood 26/11/03; 'The Training of Troops during 1906' *JRUSI* L (1906), p 1523; Towle notes Hamilton's support *Influence* p 84; WO 279/9 pp 119-120; 'Training 1906' p 1523; Glossary.

¹⁴³ L/MIL/17/5/1811 p56; 'Training of the Troops during 1907' *JRUSI* LII (1908), pp 89-90.

argument against Towle's thesis that British formations were insufficiently extended are British criticisms of dense German formations and German reports of wide British extensions from 1906.¹⁴⁴

Dr Towle implicitly criticises Haig's warning against 'premature extension,' but here the dual meaning of 'extension' deceives him. This did not relate to the physical distance between men in combat but to deployment from manoeuvre to fighting formations. Haig's warning has validity.¹⁴⁵

Conclusions

Current scholarship has interpreted the British assessment of Manchuria's lessons as a failure to foresee the tactical conditions which prevailed between 1915-18. This thesis argues that Manchuria's lessons, seen without the benefit of hindsight, were not so straightforward. Many contemporaries, including several MAs, saw tactical continuities between Manchuria and South Africa. Gen De Negrier, a noted authority, and the Germans concurred.¹⁴⁶ Modern analysts have stressed the tactical discontinuities between the two wars. Here it is argued that, however correct these retrospective arguments are, they were not emphasised before 1914.¹⁴⁷

Dr Towle has stated that Manchuria's results on Britain were small; here it is argued that his judgement must be qualified. Accepting that contemporary opinion saw much continuity, Manchuria's unique effects were certainly small, though it revived interest in sieges and more minor lessons were implemented than Towle cites. But continuity is significant in its own right. Dr Towle argues that the British failed to align their tactics with their new continental strategy. He implies that more

¹⁴⁴ 'Training' pp7,10,13; Glossary; Capt Yate, an ex-Manchurian MA, *The Manoeuvres of the Prussian Guard Corps in 1910* (1910), p 12; Edmonds *MOFB 1914 I* pp 70,72; Maj von Heydebreck 'The British Army of the Present Day' *CR XCIII* (1908), p 257.

¹⁴⁵ Glossary; Towle *Influence* p 88 citing *Indian Training Memorandum 1910*.

¹⁴⁶ Eg Hamilton WO 33/1518 pp 37-8, Nicholson disagreed; *Lessons*, p 8; 'Von Lobell Reports 1904' *JRUS/ XLIX* (1905), p 1277. They were German official documents, translated annually in Britain.

¹⁴⁷ Col Connaughton *Rising Sun and Tumbling Bear* (2004), pp 10,348.

emphasis should have been placed on firepower and positional tactics, the lessons that Manchuria, in his judgement, taught. But until 1911 British strategy was not dovetailed into French plans and thus demanded operational and tactical mobility.¹⁴⁸ Nor could Britain assume that a major war would start with positional combat; neither France nor Germany planned for this. French tactics, though generally incoherent, were neither positional nor defensive. Had the British adopted such tactics, it is likely that there would have been problems in 1914.¹⁴⁹

Dr Towle claims that Manchuria damaged British tactics. Certainly extensions reduced, but these were probably excessive given existing communications. Some contemporary evidence contradicts him. Continued British interest in initiative, the antithesis of close-order tactics, weakens his argument, while the substantial increase in divisional artillery after Manchuria impugns his proposition that artillery was devalued. Manchuria links South Africa to *FSRs 1909*'s emphasis on manoeuvre. To contemporaries Manchuria showed the dangers of congealed combat: bankruptcy in Japan, revolution in Russia.

¹⁴⁸Towle *Influence* p 18.

¹⁴⁹Not least because increasing artillery would have delayed the BEF's deployment.

Chapter 9 Doctrine, Command, the Staff and Training

An' thus in memr'y's cinematograph,
Now that the show is over, I recall,
The peevish voice and 'oary mushroom 'ead,
Of 'im we owned was greater than us all,
'Oo gave instruction to the quick an' the dead-
The Shuddering Beggar- not upon the Staff!

Introduction

This Chapter argues the Army advanced from drill towards doctrine in order to guide greater initiative and to facilitate manoeuvre in increasingly complex combat. This new theoretical emphasis demanded a substantial mental shift for a service with an anti-intellectual bias.¹ The Chapter analyses doctrine's links with the staff. Improvements in that organisation aided the introduction of doctrine, or if not purposefully intended so, they would have been beneficial. The training system altered to accommodate complexity and initiative and to develop judgement. These alterations also helped to introduce doctrine. This Chapter examines the principal manuals, *CTrg 1902, 1905 & FSRs 1909*. It concludes that the assessment that there was no British military doctrine before 1914 is wrong.²

Doctrine

Definitions

Doctrine is defined as: 'that which is taught' or 'teaching' and in this sense armies always have had doctrine. But this definition is inadequate as it can simply be applied to Dundas's 18 Manoeuvres, rigid drill with little scope for initiative. However the link made between training and doctrine is significant. The quantitative and qualitative improvement of training from 1900 demanded a more doctrinal approach. Reasoned deductions about future combat, ie doctrine, were needed in order to determine what must be taught. Furthermore to prevent confusion, such deductions had to be Army-wide with uniformity imposed in training.

¹ *ADP 2 Command* (1995), p 2-A-4.

² Brig Bidwell and D Graham *Firepower* (1982), p 2.

However, a contemporary military definition of doctrine gives a better insight into its nature:

Fundamental principles by which the military forces guide their actions in support of objectives.³

Such principles demand study to identify and thus have implications for the staff, the body charged with examining issues systematically.⁴ 'Fundamental' also suggests that the principles so obtained should be consistent. The Army stressed identifying 'principles' from 1902 and, if they are accepted as essential components of doctrine, this suggests that it was being developed then.⁵ Doctrine's link with objectives implies that it tends to relate to the higher military levels where aims are decided. Therefore it has a greater involvement with the strategic and operational levels of war rather than tactics. This further suggests that doctrine has a greater affinity with manoeuvre rather than tactically-dominated attrition. Manoeuvre stretches communications more than positional warfare and tends to be fought at a higher tempo thus making initiative and doctrine more necessary.⁶

A contemporary analysis of doctrine is valuable in comprehending its nature and benefits:

Knowledge and understanding of doctrine... aid clarity of thought in the chaos of ...war. Sound doctrine provides a common approach... which is not bound by prescriptive rules. This will lead through training to consistent behaviour, mutual confidence and properly orchestrated collective action, without constraining individual initiative. Doctrine also encompasses organization and command, to ensure unity of effort.⁷

Neither quotation suggests rigid compliance. The second's reference to chaos suggests how doctrine guides initiative amidst complexity. The accentuation of initiative from 1897, analysed in Chapter 7, is another argument for doctrine's

³ JA Simpson & ES Weiner *The Oxford English Dictionary* (Oxford 2001), p 916; *DMO* (1996), p 1-1.

⁴ Col Henderson *The Science of War* (1905), p 419.

⁵ WO 32/6782 'DMT/CGS 3/12/04' refers repeatedly to 'principles' in tactics and training.

⁶ C Bellamy *The Evolution of Modern Land Warfare* (1990), pp 60-2 suggests that increased dispersion fostered the operational level. Figure 3.2 shows combat's spatial expansion; Chapter 5.

⁷ *BDD* (1996), p 1-4. The point on tempo can be deduced by comparing Megiddo to 3rd Ypres.

emergence, for, as the quotation above suggests, it balances control and independence. Applying doctrine catering for uncertainty demands judgement, developed by training and education, rather than rigid obedience instilled by drill.⁸ Henderson concluded that a key priority of the LI system was: '[t]o train the judgement of the officers, so that when left to themselves, they may do the right thing' supports this proposition.⁹ Developing judgement demands education and principles which serve as: 'a framework of understanding...to provide direction' to thought.¹⁰ Clausewitz commented on the importance of training in this process:

peacetime manoeuvres are a feeble substitute for [war] but even they can give an army an advantage over others whose training is confined to drill. To plan manoeuvres so that some of the elements of friction are involved, which will train officers' judgement... is far more worthwhile.¹¹

It follows that training is different for doctrinally-reliant armies than for those imposing top-down control. The former involves delegation and complexity, aiming to develop judgement, with greater toleration of mistakes. Training indoctrinates commanders, training validates doctrine. This relationship has long been militarily accepted, having similarities with university research and tuition.¹²

Contemporary analysis suggests that relationships exist between doctrine, organization and command, linked by the staff, while 'unity of effort' emphasises aims' importance, ie that all activity must support their achievement. Armies emphasising doctrine are more likely to stress all-arms cooperation, partly because army-wide doctrine develops judgement and facilitates cooperation between the arms. In turn all-arms cooperation requires common standards of training. These encourage doctrine's development. British manuals from 1902 stressed inter-arm

⁸ Gen Langlois, translated GS, *Lessons from Two Recent Wars* (1909), pp 144-5; Chapter 7.

⁹ Henderson *Science* pp 347-8, 364; Chapter 2

¹⁰ *DMO* p 1-2.

¹¹ Col Callwell *The Tactics of Home Defence* (Edinburgh 1908), pp 4-5; Eds M Howard & P Paret Gen von Clausewitz *On War* (1993), p 122.

¹² *ADP 2* p 3-3; Henderson *Science* p 347; eg *MAT India 1910-11* extensively criticises violations of *FSRs*, *AR II* (1912), p 59. The British and American Armies link doctrine and training, eg TRADOC, DGD. *DMO* (1996), pp 4-4, 4-39, 4-44 analyses this; *Ibid* pp 4-45-6.

cooperation. This suggests that conditions were conducive to doctrine emerging.

Modern military doctrine dates back to Clausewitz, being first implemented by Moltke.¹³ Henderson analysed its development, stressing the importance of 'judgement,' 'principles,' as well as training and the significance of strategy in the process. Before 1899 the British had no doctrine as currently militarily defined. *IDB 1896*'s very title suggests rigidity. Tirah had exposed its defects, emphasising that initiative, staffwork and coordination were essential in complex combat. From Tirah and the Peninsular LI, Verner and Henderson developed a tactical model which emphasised initiative and judgement in such fighting.¹⁴ This, Henderson's analysis of the Germans and his stress on strategy at the start of *Stonewall Jackson* suggest that conditions likely to promote doctrine were developing.

Doctrine and Staffwork

Success in combat not only relies on initiative but also on transmission of command aims, co-ordination and synchronisation.¹⁵ The staff generates these effects, which may be broadly described as staffwork, allowing generals to concentrate on essentials.¹⁶ Earlier it was argued that attrition influenced staffwork, putting a premium on the managerial accumulation of resources to generate firepower. However manoeuvre equally depends on intelligent staffwork as unguided initiative is dangerous. Control is as important in manoeuvre as it is in attrition. Indeed manoeuvre, dependent on careful selection of aims and their transmission, reliant on synchronisation and coordination, has perhaps greater need for intelligent

¹³ B Condell & DT Zabecki *On the German Art of War Truppenfuhrung* (Boulder 2001), p x.

¹⁴ S Wilkinson *The Brain of an Army* (1890), pp 96-7; Gen von Caemmerer, *The Development of Strategic Science during the 19th Century* (1905), ix, examines Moltke's methods using mobility and initiative, which 'demanded uniformity of thought' ie doctrine; Henderson *Science* pp 4-7; Chapter 2.

¹⁵ The section used no staffwork in its skirmish, but that it reached its start-line, its training, organization and logistics, represented vast staff effort, Chapter 1; It is probably more than a historical curiosity that the British Army in South Africa popularised the wearing of wristwatches, suggesting greater synchronisation, JR Beniger *The Control Revolution* (Cambridge 1986), p 329.

¹⁶ Brig Gen Aston *Staff Duties and Other Subjects* (1913), pp 3-5.

staffwork than attrition which can offset mistakes by numerical superiority.¹⁷ In manoeuvre there is a greater requirement for creativity as instanced by Manstein's concept for SICHELSCHNITT. This contrasts with the managerial dumping calculations required in attrition. The German Army, originators of the modern staff system, doctrinally manoeuvrist, was superior in operational staffwork in the World Wars to the Allies, who relied more on attrition. The latter were better provided with resources and were arguably better at logistic staffwork.¹⁸

Developing and disseminating doctrine and planning training, largely staff functions, are critical. Though initiating doctrine may not depend absolutely on the staff, its development and continuity depends on them as Arnold Foster emphasised:

[i]t is impossible to secure continuity of policy and action without reasoned and well-ordered thought. At present, as in the past, every Officer... has his own opinion on every conceivable military subject... Thus continuity of thought, of purpose and of action are wholly impossible.¹⁹

Continuity is essential to establishing doctrine, while developments in the staff and staffwork suggest increasingly complex combat, which in turn demands a more doctrinal approach and more advanced training.

Doctrine and Weapons

Purpose-designed weapons embody basic assumptions on warfare and thus represent crystallised doctrine. From 1900 Britain developed its new field guns, the Army's largest pre-1914 equipment programme, in a radically new way. This

¹⁷ Lt Col Maurice 'The Use and Abuse of the Initiative' *AR* VII (1914), p8; Lt Col Henderson *Stonewall Jackson* (1898), pp 220-2; pre-manoevr assembly demands tight traffic control, eg poor staffwork prejudiced the reserves' move at Loos and during manoeuvre staffwork is critical, Brig Gen Edmonds *MOFB 1915 II* (1928), pp 394-5; WO 108/299 pp10-11 shows how uncoordinated interference damaged rail mobility in South Africa.

¹⁸ BR Posen *The Sources of Military Doctrine* (Ithaca 1984), pp 65-6 analyses German links between mobility and offence; Col Dupuy *A Genius for War* (Fairfax 1989), pp 47,49,51-2. But the Germans suffered logistically. AR Millett and W Murray *Military Effectiveness I The First World War* (Boston 1988), p 15 for the importance of C3 and staffwork on increasing German mobility, despite their poorer physical capabilities, eg in motor transport; FM von Manstein *Lost Victories* (1958), pp103-105; M van Creveld *Supplying War* (1977), Chapter 7.

¹⁹ S Bronfeld 'Fighting Outnumbered' *JMH* 71 (2007) for the influence of Gens DePuy and Starry in initiating doctrine; B Condell, DT Zabecki *Truppenfuhrung*, p xi; Capt Lupfer *The Dynamics of Doctrine* (Leavenworth 1991), pp 8,56; AFPs 50321 'Memorandum ... Formation of the [GS].' Maj Gen Callwell *Field Marshal Sir Henry Wilson I* (1927), p 63 claims this was Wilson's work.

involved user-specifications based on assumptions about future combat. Previously the Army had relied on manufacturers' ideas. The SMLE was developed similarly, though it was less technically radical than the new QFs.²⁰ The introduction of purpose-designed weapons shows that combat was becoming more complex and that consequently greater intellectual effort was needed if weapons were to match the expected conditions of combat. Doctrinally developing weapons also encouraged thinking about future tactics, in turn causing adjustments to training.

South African Defects

South Africa revealed an array of defects in the Army's organization, its inter-arm and inter-formation cooperation, staffwork and command. There were also defects in preparation for the war and strategic errors at its start. The latter are outside the scope of this thesis, but they all suggest serious defects in Army's command and staff system. Henderson blamed bad staffwork on the small numbers attending Camberley and the consequent lack of common principles.²¹ Ultimately the whole points to doctrinal defects, a want of thought about war, its needs and the principles involved. Col Clarke commented:

The more I study the SA war (sic), the more I see that Staff incompetence, muddling and disorder lay at the very root of our humiliations.

He diagnosed that staff-disorganisation meant that thinking about war, a pre-requisite for developing doctrine was impossible.²² The RCWSA heavily criticised improvised formations, poor staffwork and the ensuing chaos, concluding:

For an Army of 90,000 ... we had, probably as many trained staff officers as were required. But when the Army grew to ... 300,000...appointments had to be filled by men with whom want of experience was the rule ... [T]he absence of a definite system of staff duties... was undoubtedly prejudicial to the smooth running of the military machine. Many instances of indifferent staffwork might

²⁰ BalPs *RMMISAs 1895-1928* I 'Memorandum ...ordnance factories' pp 4,6; Maj Gen Headlam *The History of the [RA] 1899-1914* II (Woolwich 1937),pp xi, 71-2; WO 33/192; Chapters 4&8.

²¹Henderson *Science* pp 397-8.

²² Clarke/Esher 13/6/04; 'Training of the Army' *The Times* 28/2/01 p 8.

be quoted, and it seems clear that the entire staff should be thoroughly trained; that a definite system of staff duties should be laid down.²³

Key staff officers were not psc qualified, this added to the formidable problems caused by an incoherent system of staff duties, while the SAFF had been muddled on mobilisation. Col Vincent commented that: 'the army corps, divisions, and brigades [mobilised for South Africa] were formed upon no intelligent or predetermined scheme.'²⁴ As has been pointed out above, doctrine includes organisations. Hilyard remarked of his brigade, the only one to deploy intact to South Africa, that it:

was composed of four battalions that had been under my command....they had been through a course of company training, battalion training, and brigade training....This... practical work proved subsequently in the field of the greatest ...value. The [COs] were thoroughly known to me and to one another; they understood one another ... [and] their company commanders.²⁵

Hilyard's stress upon cohesion is significant but equally important is his accentuation of training, particularly company training. This was an important means of injecting initiative. Amery commented:

Englishman would not dream of sending a crew to Henley whose members had never rowed together before, were quite content that a general's staff should be hastily improvised at the last moment from officers scraped together.

As Table 29 shows, he hardly exaggerated. French noted that the cavalry brigade staffs were new to their brigadiers, who were in turn unknown to their formations; this, just before the key manoeuvre which led to Kimberley's relief, he remarked laconically was: 'a great disadvantage.'²⁶

Organisational incoherence did not end after disembarkation. In several battles, Colenso, Spion Kop and Paardeberg, command structures were unnecessarily disrupted and superiors interfered in details with unfortunate results.²⁷ Coke who had

²³ *RCWSA Report* (1903), p 53.

²⁴ Table 29 Buller's COS, the AAG 1 Division and the Cavalry Brigade BMs were not psc; 'Lessons from the War for Immediate Application' *USM XXIV* (1901), p 35.

²⁵ *RCWSA Evidence II Q 15972*.

²⁶ Chapter 7; *RCWSA II Q16182*. At least Barton and his BM were only separated by the length of Piccadilly, see Table 29 sers 45&6; LS Amery *THWSA II* (1902), p 38; *RCWSA Report* p 59.

²⁷ Eg Buller's attempt to organise the recovery of Long's guns at Colenso, Maj Gen Maurice *BROHSA I* (1906), pp 362-6. Consequently the senior neglects his own task and subordinates feel distrusted.

experienced confusion on landing in South Africa, commenting on Spion Kop where he assumed command of a division with an improvised staff in the middle of the operation: 'here was another of our many cases of "organisation disorganised."'”²⁸ The SAFF's unwieldy corps-based organisation which had to be broken down when fighting started, partly caused this disruption.

Training is related to doctrine but the British Army in 1899 was badly trained. Repington noted that manoeuvres before 1899 were poor, while Roberts commented after South Africa:

manoeuvres on a large scale were so infrequent that it was impossible to ascertain by this practical test whether ...senior officers had kept their knowledge, whether they could handle troops in accordance with the principles of modern tactics ...Troops in action cover such a wide front and so great a depth, that control of a battalion today is more difficult than a brigade a few years ago.

Roberts stressed combat's greater complexity and the resulting need for all-arms training. Haig commented that: '[t]he chief danger... arises from the utterly false usages hitherto practiced ... at manoeuvres.' Clarke considered that the Army in Britain was undertrained, while exercises were 'farcical' before 1899. He blamed these problems on the staff. Whatever the cause, manoeuvres neither effectively trained nor tested commanders, staffs and troops.²⁹

Firepower-induced dispersion made coordination and signalling more important; both in turn influenced staffwork. South African distances and numbers, (the SAFF was vast by British standards), further increased complexity. Wartime improvisation of staffs, organisations and tactics no longer sufficed. Now systematic preparation for war was vital. This demanded staffs who would think about future tactics and weapons. In turn this demanded doctrine to give the staff a framework for

²⁸ *RCWSA Evidence II* Qs 20199-20205; *Ibid* p 442 and Appendix O.

²⁹ 'Suggestions from the Front' 19C XLVIII (1900), p 714; *RCWSA Report* (1903),p 53; Haig, *RCWSA II* p 404; *The Times* 28/2/01 p 8.

analysing war and devising training.³⁰

Poor tactical coordination in South Africa partly stemmed from bad staffwork, there was no army-wide system of staff duties, partly because there was no common understanding between commanders, a doctrinal problem, while many were unused to using staffs, suggesting inadequate training. Both Buller and Roberts disrupted command structures unnecessarily. Roberts often used his private secretary to issue operation orders, suggesting that he was trying to command personally, rather than using his senior operations staff officer.³¹ De Lisle, a psc, was scathing on the effects of poor staff work, generally involving muddled movement, and poor orders at Paardeberg. Buller was equally destructive, delegating to subordinates who had inadequate staffs and communications and then interfering, while failing to act decisively himself. Roberts criticised Buller's failure to intervene while Warren was mishandling the Spion Kop operation.³² Buller abandoned most of his staff when he moved to Natal and his exercise of command there was denounced by a future CIGS and brother rifleman.³³ At Paardeberg, Kitchener, without staff, communications or clear authority, was unable to coordinate attacks. Later, when CinC, Kitchener proved reluctant to use his staff and had difficulty coordinating widely dispersed and generally very mobile counter-guerrilla combat. Roberts, despite personal errors, saw poor staffwork as a major problem and stressed the staff's role in training.³⁴

Operation orders, critical instruments of command, were often vague, due to poor staff work and the absence of standard formats, or over-prescriptive. Buller's

³⁰Table 44; EPs 8704-35-33 p 1. Similar criticisms had been made after Tirah; Chapter 2. Doctrine was needed not just because of poor tactical performance but because strategy undirected by doctrine had exposed Britain to serious defeat in 1899; *DMO* p1-3.

³¹Grierson assumed a roughly comparable post to Col GS Ops and systemised the issue of orders. B Williams *THWSA* IV (1906), pp 412-3 for the problems of Roberts both commanding and acting as COS. Roberts also disrupted Intelligence unnecessarily. There was of course formally no G Staff.

³²DLPs 2 'The South African War-1' pp 17,18,29. *SKDs* (1902), p 4; Chapter 3.

³³Table 2; Maj Gen Colvile *The Work of the Ninth Division* (1901), pp 22,69. Roberts had Stellenbosched Colvile; HEWPs 3/1/5, pp 8,17,25.

³⁴Gen Hamilton *The Commander* (1957), pp 101-2; *RCWSA Evidence* II Qs 13130-1; E Childers *THWSA* V (1907), pp 89-90, 270-3; BalPs *RMMISAs* I 'Minute by the [CinC] on... training [GS].'

orders at Colenso and Spion Kop were defective. A veteran analysed the effect of over-prescriptive orders on subordinates indoctrinated in obedience:

You must break down, by every means in your power, the paralysing habit of an unreasoning and mechanical adherence to the letter of orders... when acting under service conditions.³⁵

French commented:

[t]actics crystallise in Orders (sic): it is essential for officers to be able to understand how to interpret orders, correctly and also how to be able to issue clear, complete, and concise orders.³⁶

There were clearly serious defects in the Army and its officers' intellectual standards.

Wolseley had commented earlier during the Sudan Campaign that some COs were unfit to be corporals, staffwork was poor and that there was overmuch personal rivalry. Similar faults recurred in South Africa causing Col Clarke to deduce that:

The only possible means of raising the educational standard and the military efficiency of our Army is to have a highly trained [GS] to leaven the mass of ignorance from the top downwards.³⁷

Clarke did not directly call for doctrine, but developing the Army's education and establishing a GS system would provide a intellectual coherence which would foster doctrine.³⁸

The Demand for Doctrine

Tirah had seen improvised formations, poor staffs and bad staffwork heavily criticised, but no direct demands for doctrine had resulted. From 1900 commentators not only denounced these failings, remedying them would have facilitated doctrine's introduction, but some argued for doctrine directly. A military journal commented that the lack of a system of tactics and strategy was responsible for the Spion Kop

³⁵ *GEOHWSA I* (1904), pp 53-6 ; *SKDs*, Enclosure D; Capt Russell *The Employment of Artillery in the Field ...* (1902), p 5.

³⁶ *RCWSA Report* p 59; Chapter 3; *GEOHSA II*, pp 139-40, 202; *RCWSA Evidence II* p 301. 'The Place of Doctrine in War' *EDR CCXV* (1912), p 27 highlights doctrine's value in interpreting orders; Capt Marindin *Staff Rides* (1907), p 55 criticised many orders written in training.

³⁷ H Kochanski *Sir Garnet Wolseley* (1999), pp 172-3; Clarke/Esher 13/6/04.

³⁸ *DMO* p 1-2.

debacle.³⁹ Amery recommended establishing a common school of military training and thought, deploring the absence of army-wide standards and commanders' tendency to play for their own ends rather than the Army's. He blamed this on: 'the lack of a GS spirit.' This suggests the lack of animating army-wide values, as well as poor intellectual standards. Doctrine would partly provide these, thereby enhancing cooperation. Roberts stressed the need for thorough staff training based on a combination of manoeuvres, staff rides and improvements at Camberley.⁴⁰ Such a system would have translated into greater coherence by virtue of common training even if written doctrine was unchanged. But such enhancements would have probably led to formal doctrine. Buller also stressed staff training, remarking that:

the great defect at present throughout ... the Army is a want of a sense of the paramount importance of cooperation.

He blamed this defect on over-regulation. Individuals naturally take no chances in a culture which accentuates blame. This is why forces which understand what professionalism entails tend not to be over-critical of honest mistakes in training.

Buller continued:

scarcely one officer in a hundred who has been taught any rule which would guide him how to act in deciding how to act when confronted by the problem... "what ought I to do?" ...[I]t is a chance if he acts aright; because, owing to his defective training, he acts on the wrong impulse. He does not ask himself how he can best further the operation as a whole.⁴¹

Both quotations imply doctrine; the first is rather more obscure but doctrine enhances cooperation, differing sharply from the rigidity which Buller criticised. In the second, though his mention of 'rule' suggests more rigidity than doctrine usually involves, but Buller's reference to 'guide' and his stress on overall operational objectives imply it. French recommended that:

a large proportion of officers should yearly take part in Staff Tours... By this

³⁹ *ANG XLI* (21/4/00), p 378.

⁴⁰ *RCWSA Evidence II* pp 468-9; *Ibid* Qs 13163,13191.

⁴¹ *Ibid* p 213; Chapter 7, Kipling's verse.

means uniformity of ideas in staff management and tactics generally would gradually be produced throughout the Army.⁴²

This suggests how training helps to generate doctrine. General Warren emphasised:

We require complete uniformity in the army as to principles, but such uniformity does not constitute the army as a machine capable of acting only in a certain groove; rather it enables it to become an organisation trained to adapt itself... an organisation which assigns to every man ... responsibility, animating the whole...with a spirit of self-reliance.

Uniform principles suggest doctrine and Warren saw that they would not inhibit initiative. Wood, the AG, stressed that: 'tactical principles' should be instilled during officer training.⁴³ Principles, as argued earlier, equate to doctrine. Lt Col May, writing at Camberley, stressed war's varied nature and consequently the need for insisting on its spirit, rather than on rigid tactical rules. May did not formally advocate doctrine, but his diagnosis that: 'what we want ... is quick discernment of how best to apply to the case in hand ... knowledge' suggests it. That May wrote at Camberley may indicate the way the future elite were thinking.⁴⁴ An anonymous article, possibly officially inspired, emphasised the need to consider theory in relation to warfare. It warned against the staff becoming mired in administration and stressed instilling 'principles.'⁴⁵

Both German and French authorities criticised Britain for ignoring doctrine between 1899-1902. Their criticisms were made somewhat later, but, given that British introduction of doctrine took time, their views are important. General Langlois was adamant:

The drillbooks in England before [1899] were quite as good as those of other European armies; they were faithfully carried out to the letter, but they were not connected by a general common doctrine. This introduces a new factor, which is independent of textbooks, *tactical education*, or *doctrine* (sic)... rendered indispensable by the increased necessity for initiative.

⁴²RCWSA Evidence II pp 213,301; Haig commented very similarly, Ibid p 404.

⁴³'Some Lessons of the South African War' NR XXXVIII (1901), p 182; Akers-Douglas p 125.

⁴⁴ *A Retrospect of the South African War* (1901), pp 35-6, 37.

⁴⁵ 'Communicated' 'General Staff Duties' JRUSI XLV(1901),p 863. As the RUSI had excellent links with the Army's hierarchy, this suggests that the author was either senior, writing officially or both.

He was charitable; Tirah and South Africa had seen *IDB 1896*'s injunctions repeatedly violated, while the Akers-Douglas Committee had already condemned the British manuals as unsystematic and ill-thought out. The Germans concluded that: '[British] leaders...had no mental grasp of the requirements of a modern battle.' They continued by criticising British training. The quotation is superficially unclear but British commentators were clear that they meant doctrine.⁴⁶

From almost the start of the war, soldiers and commentators were convinced that the Army's intellectual standard was insufficient for modern war. Doctrine was essential as control and initiative had to be balanced.

Doctrine post-1902

Training

Earlier a relationship was suggested between training and doctrine. After South Africa training and its higher direction were revolutionised. Callwell commented on: 'the great revival in training which took place consequent upon the experience of the South African War.' The Army switched from training largely based on drill to realistic manoeuvres over the period 1890-1914, with the main effort coming after 1902. This encouraged the development of doctrine. Before training had been the AG's responsibility, but the Akers-Douglas Committee's recommendations led to the reestablishment of the DME with Hilyard as its first Director and Rawlinson and Wilson on its staff. Roberts selected Hilyard on the basis of his Camberley and South African service and he ensured that the DME was directly under the CinC.⁴⁷ This and the posting of high-calibre individuals to the DME suggest that training would have greater priority than before 1899.

⁴⁶*Lessons from Two Recent Wars* (1909), p 145. Though published officially in 1909, Langlois wrote in 1904; Akers-Douglas Qs 595-600, 798-803; *GEOHSA* II pp 331,343-4; 'The British Army and Modern Conceptions of War' *EDR* CCXIII (1911), pp 922-3. Chapter 2 for *IDB 1896*'s defects.

⁴⁷BP 49725 'Minute on ... Hilyard's Position'; *ANG* XLIV (31/1/03), p 10.

Major manoeuvres in Britain became standard from 1902. Before 1899 there had been few and these were often flawed by non-tactical phases and standing camps. After 1902 more frequent, more realistic manoeuvres not only improved formation and staff training but developed doctrine and trialled new equipments. The 1903 Manoeuvres tested the use of dispersed batteries and artillery signals. The 1904 Essex Manoeuvres examined invasion's feasibility. They also gave valuable lessons on close-country tactics and inspired an RN/Army conference on overseas expeditions. Later manoeuvres validated the new MT supply system and air reconnaissance.⁴⁸

Reporting on training increased. French issued annual training reports at Aldershot, as did many other commanders, including Ian Hamilton at Southern Command. These reports do not appear to have exact pre-1899 equivalents, thus suggesting greater emphasis on correcting mistakes and improving uniformity. Training consequently would have been more effective. Somewhat later Haldane issued a series of training notes for his brigade. These emphasised training the instructors before training the soldiers, thus ensuring more effective results, and systematic instruction.⁴⁹

The purpose of training also changed with a new emphasis on instilling principles. French stressed:

During [1904] my great endeavour has been to set schemes ... which might illustrate the great principles of war. My object has been to stimulate intelligence and cultivate military instinct by inculcating those principles.⁵⁰

French was developing both doctrine and initiative. No similar emphasis on

⁴⁸Chapter 2; Maj Geddes 'Communication between Artillery units in action' *PRAI* XXX (1903-4), it is unclear whether this was a formal objective; AFPs 50318; WO 33/620; Col Callwell *The Tactics of Home Defence* (Edinburgh 1908), pp 5-8.

⁴⁹Hamilton's were published in the *JRUSI*. An exception is Buller's 1899 Memorandum; according to the *USG* 8/1/98 Connaught issued a training memorandum in 1897. That pre-1899 reports do not survive in the NA, while many were produced after 1902 suggests greater attention to training; *Notes on Training* issued 1912-14 (reprinted Rhine Army 1919).

⁵⁰ WO 27/503 'Training ... 1st Army Corps 28/9/04' p 1.

introducing principles in training has been traced in the Army before 1899. French also considered that the British must expect to be numerically inferior. He consequently stressed the need for 'all ranks' to know something of the art of war. The former implies reliance on manoeuvre rather than attrition and anticipates *FSRs 1909*'s manoeuvrist slant. French's second point suggests how doctrine links to initiative and the new attitudes to the junior ranks. French's emphasis on instilling principles was partly based on Japanese performance in Manchuria; French commended their morale. French also emphasised principles in 1905, stressing, similarly to *CTrg 1902*, that:

if we would ensure success in war, knowledge must be absolutely instinctive and as it were, a second nature to us. To quote the words of one of the greatest leaders of the Franco-German War:-"The principles of our employment must form part of our flesh and blood."⁵¹

'Knowledge' suggests greater intellectual effort, while 'principles' suggests doctrine. That French emphasised them in successive years suggests their importance. French made the same points on instinctive knowledge after 1918, suggesting that it had become deeply embedded in his mind.⁵²

French criticised officers' understanding of strategy after his experience of training in 1904. Consequently he reissued Henderson's article on strategy to officers at Aldershot. This outlined how smaller forces could defeat larger ones through manoeuvre and surprise.⁵³ It also highlighted the importance of strategy, arguing that strategic unlike tactical mistakes were rarely recoverable. It stressed that many more officers than just CinCs needed to understand: 'strategical principles' because of the dispersed nature of modern combat. He recommended using staff rides to inculcate strategic knowledge.⁵⁴ A shortened version of Henderson's paper was issued to

⁵¹ Ibid p1; *CTrg 1902* p 3.

⁵² WO 163/16 'Annual Report IGF 1910' pp 219-220; FM French /9/4 (1919),p 11.

⁵³ WO 27/503 'Training ... 1st Army Corps' p 1; WO 27/504 'Aldershot 1905.'

⁵⁴ WO 27/504 'Aldershot 1905' pp 2-3. Henderson stressed historical, theoretical study and staff rides.

Camberley students down till at least 1912.⁵⁵ French's stress on strategy suggests greater focus on war's operational level and manoeuvre, while the fact that he was emphasising principles suggests that doctrine was being developed.

French also wrote *Theoretical Instruction in the Art of War*. This is mechanical in tone, the most significant fact is that French wished to improve the professional training of his command and that he focussed on strategy. He also stressed the importance of strategy and principles on staff rides.⁵⁶ It is unclear how widely *Theoretical Instruction* was issued, but it was designed for non-pscs. This suggests more attention to theoretical training and greater emphasis on war's operational level. French continued this theme later, criticising senior officers' lack of 'instinctive knowledge and perception of strategic principles.' French's stress supports the link, made earlier, between doctrine and the higher levels of war.

French blamed these faults on the lack of a historical GS section able to undertake:

the formulation and laying down of principles deduced from the highest and best war experience. I hold that these principles and the power of applying them to any given problem or situation must be, as it were, instilled as a second nature in the mind of any soldier who aspires to exercise high command in war. I regret to report that I observed a distinct lack of these qualifications in most of our higher leaders, and hence results the hesitation, ill-timed combination, faulty plans, and grave tactical errors which have been a marked feature of the larger manoeuvre[s].

French describes doctrine as it would be understood today, stressing the staff's analytical role in developing it. South Africa had seen similar errors to those French observed and soldiers were probably able to read between the lines to see an implied criticism of British performance there. The emphasis on theoretical training of officers continued: in 1907-8 Aldershot promulgated details of such instruction, while Chesney's *Waterloo Lectures* were specifically reprinted for this.⁵⁷ French

⁵⁵ ROBPs 1/2/10 'Notes on Strategy by Col Henderson. Compiled for the use of students at the Staff College' (6th edition 1912). That it had gone through 6 editions suggests its importance.

⁵⁶ Undated; WO 27/504 Aldershot Staff Tour Final Remarks' pp 1-2.

⁵⁷ WO 27/491 'Training ... Winter 1907-08;' Col Chesney *Waterloo Lectures* (1907).

reiterated his idea of instilling principles in 1908 when he ordered his arm-inspectors to check that:

the system of instruction develop[s] in the minds of officers... a thorough and instinctive knowledge of the main principles... of war.

Another concern was:

Are officers trained ... to approach the solution of strategic and tactical problems with sound definite ideas as to the principles of war and do they ... understand the “appreciation of situations?”⁵⁸

The last point suggests that far greater attention was being given to intellectual effort with all that it implied for the development of professionalism and doctrine. Despite this French was scathing after his first inspections in 1908:

I regret, however, to be obliged once more to record my conviction that a great deal more needs to be done in this direction [theoretical instruction in the higher branches of the art of war] before the highest level of efficiency ... is reached. In the staff tours which formed an important part of my divisional inspections, in written appreciations of officers of all ranks, at the conferences, and finally at the ... Army Manoeuvres, I have seen evidence of a lack of knowledge of strategical principles, and a failure to appreciate any given situation accurately..., combined with an inability to grasp the salient factors of the problem. ... I become more and more convinced that many of the senior officers do not possess a sufficient knowledge of the principles and practice of war on a large scale.⁵⁹

French also made stinging criticisms of senior officers; his criticisms led to the dismissal of Scobell as IGC for neglect of training, despite the latter's impeccable social connections and fine South African record. French in 1909 denounced the GOC 2 Division for lacking strategical knowledge and for handling his formation poorly. He criticised a brigadier:

[he] does not yet show that he possesses sufficient knowledge of the art of war in its higher branches to fill his present post.

These were strong criticisms in an institution that many have seen as a pleasant social club. Douglas, the next IGHF, concurred with French's criticisms of senior officers, stressing in 1912:

⁵⁸ WO 27/508 'IGF Report 1908' p 28.

⁵⁹ Ibid 'IGF Report 1908' p 5; the words in brackets are taken from the paragraph above.

Still too many officers in command ... who are incompetent instructors, and inefficient Commanders. If progress is to be sought, it must be by raising the standard of the unit commanders by the elimination of the unfit.⁶⁰

Both French and Douglas recommended the introduction of more selective promotion.⁶¹ French's and Douglas' comments and actions suggest the swing towards professionalism, the emphasis on the strategic, or in current parlance, the operational level of war, and the fact that doctrine in the form of principles was emerging.

Grierson felt that the remedy for poor staff performance in South Africa was staff rides. These, copied from Germany, were becoming frequent by the mid-1900s. French commented of them:

[t]he object is ... to illustrate by examples on the ground how the general strategic situation must always govern all tactical operations. I trust that the principles involved may be inculcated amongst all ranks.⁶²

His point on strategy suggests greater theoretical emphasis, the shift towards war's operational level and more subordinate initiative. CGS held a major operational level ride in 1906. Haig's Indian rides were also set at this level.⁶³ Regimental tours, less elaborate rides, were introduced and the topic inspired four books. They suggest much more attention to both theory and training.⁶⁴ The 1908 Army Staff Ride, which included a preliminary wargame, tested the forthcoming *FSRs*. Afterwards CGS summarised its lessons and the main principles of staffwork. This was a more coordinated way of examining problems, developing doctrine and conducting training. Before 1899 manoeuvres had been conducted without such preparatory training.⁶⁵ Haig emphasised *FSRs*' principles on staff rides as did Smith-Dorrien:

⁶⁰ WO 27/508 'IGF Report 1909' p 64; Ibid 'IGF Annual Report 1912' pp 564-5.

⁶¹ Ibid 'IGF Report 1912' p 5.

⁶² DS McDairmid *The Life of Lt General ... Grierson* (1923), p 271 citing Grierson/Stamfordham 7/7/00; WO 27/503 'Training Aldershot 1905' p 155.

⁶³ *Report on Staff Ride in the Severn Valley 1906; Cavalry Studies Strategical and Tactical* (1907) based on Haig's 1903-6 rides; Chapter 5.

⁶⁴ Col Haking *Staff Rides and Regimental Tours* (1908); Maj Fowle *Notes on Staff Rides and Regimental and Tactical Tours for Beginners* (1908); Capt Marindin *Staff Rides* (1905); Haig *Rides*.

⁶⁵ WO 279/30 p1 noted that the 1909 training season deliberately started with 2 rides.

*'Avoid violating any great principle of war in your initial plan (sic).'*⁶⁶ More frequent staff rides and unit tours suggest more attention to theoretical training, staffwork and recognition of junior officers' increased tactical importance. French and Haig's stress on strategy in their rides also suggests that commanders were thinking more about war's operational level. This links with the developments analysed in Chapter 5.

In India Kitchener emphasised the importance of training as the basis for greater professionalism:

The whole secret of preparing for war is a matter of training and instruction, and [COs] ... who profess or show their incapacity as instructors and their inability to train and educate those under them for all situations of modern war must be deemed unfit for the positions they hold.⁶⁷

This increased emphasis on training also had implications for doctrine and the staff as argued earlier. Britain similarly emphasised officers' training duties. Kitchener's structural changes in India introduced decentralisation to promote initiative, while units were concentrated into permanent formations largely for training reasons. Proximity facilitates inter-arm and inter-unit training. It also shows that the Army in India was shifting from being organised primarily for IS to preparing for major warfare.

The Staff Colleges and Doctrine

Roberts in July 1901 emphasised that Camberley's instruction needed to become more practical.⁶⁸ Camberley pre-1914 had three very successful commandants, Rawlinson, Wilson and Robertson. All impressed students, all had influential later careers. The pre-1899 academic atmosphere and remote relations between staff and students ceased and training became more practical, while

⁶⁶ WO 279/22; HOWPs 1/17 13/7/11; WO 279/21 p 22.

⁶⁷ *RLKAI* (Simla 1909), p 213, citing IAO 35 16/1/05. Kitchener had stressed the point to Roberts earlier, PRO 30/57/28 letter 4/6/03. Chapter 7 stresses that training had now become the main peacetime officer task. French's and Douglas' comments on the same point are included above.

⁶⁸ RPs 7101-23-124-1 F43.

Methuen's advice that DS posts should be plums reserved for the best was followed.⁶⁹ Under Rawlinson Camberley looked at the higher military levels, stressing command rather than routine staffwork. This probably helped doctrine's introduction. Staff training expanded with Camberley's growth, the establishment of Quetta, the introduction of administrative staff training at the LSE and Command Intelligence courses.⁷⁰

Kitchener overhauled the staff in India, establishing 'the art of war staff' to plan future operations and founding a staff college.⁷¹ Much opposition to this was caused by fears that 2 different schools of military thought would develop, thus damaging combat effectiveness. Both the AG and QMG raised these concerns.⁷² Wolfe-Murray, the MGO, countered: '[i]t is better to have another school of thought... rather than no school of thought at all.' Kitchener concurred, feeling that India had no school of thought. He emphasised that incompatibility between Britain and India would not be allowed. This suggests that the Army's hierarchy appreciated doctrine's importance. Significantly Kitchener cited good Japanese staffwork when arguing for an Indian staff college. Emphasis on forming 'a school of thought' and common staff training suggests the contemporary pressure for adopting doctrine. Common syllabi, examinations, and exchanges of DS were instituted to prevent doctrinal divergence.⁷³

Both staff colleges helped to develop doctrine. Wilson wrote annually to DSD highlighting issues which Camberley considered important.⁷⁴ In 1907 he highlighted the need for principles for starting campaigns, for handling strategic

⁶⁹ Maj Gen Fuller *The Army in My Time* (1934), p 122, Fuller was not easy to please, as a pre-1914 student, his views, though retrospective have value; Maj Gen Aston *Memories of a Marine* (1919).pp 239-40; *RCWSA Evidence II* (1903), Q14290. Table 34 contrasts later careers of DS.

⁷⁰ WO 279/18 p 36; WO279/515 for one course. Robertson, Haldane and Edmonds lectured, while Japanese Intelligence in Manchuria was stressed.

⁷¹ *RLKIA*, pp 90, 93-4,95-6; L/MIL/17/5/1617 pp 224-6 LAO 246; Chapter 7.

⁷² L/MIL/17/5/1617 pp 204-9; WO 163/9 pp 216,218.

⁷³ WO 163/9 p218; PRO 30/57/34 Kitchener/Clarke 5/7/05; WO 163/9 p 332.

⁷⁴ Eg Quetta analysed Manchuria; see WO 106/180, *DALISCMBs*.

advance guards and the general reserve, as well as whether divisions should be concentrated or dispersed when marching? All suggest manoeuvre and the operational level. They differed from *CT 1905*'s more positional emphasis, while Wilson's stress on the need for principles shows that doctrine was being developed. He also highlighted requisitioning, billeting, controlling lines of communication and systemising field intelligence, an issue that India was also tackling. All suggest the new importance of manoeuvre.⁷⁵ Wilson and Robertson emphasised doctrine at Camberley, the former aiming to develop 'a school of thought' there. Scholarly views on the significance of Wilson's school differ, but his emphasis on developing one suggests the British adoption of doctrine.⁷⁶

Capper at Quetta emphasised studying strategy, noting that that CGS was concerned that officers were ignorant of its principles. This ties in with French's criticisms and possibly reveals a concerted effort to improve strategic understanding in both Armies. This further suggests the development of judgement, delegation and initiative. Consequently Capper ordered students to write a strategic primer incorporating: '[o]nly general (sic) [principles]⁷⁷ of the widest kind.' Later, when lecturing on strategy, Capper stressed the importance of campaigns being based on the commander's overall concept:

your idea must be framed to secure a decisive object; that you must preserve that idea, no matter how adverse circumstances seem; and that you can only preserve your idea by keeping the initiative ... and that, to keep this initiative, you must maintain a vigorous and uncompromising offensive.

Capper's stress on determination suggests Japanese influence. Though modern commentators would probably see Capper as dogmatic rather than doctrinaire, his

⁷⁵ HEWPs 3/3/9 'HW/DSD 30/10/07'; L/MIL/17/5/1810 Col Malleson 'System Intelligence.'

⁷⁶ BJ Bond *The Victorian Army and the Staff College* (1972), p 244 claims that Wilson drafted Arnold Forster's stress on continuity; Maj Gen Robertson 'Final Address ... Staff College' *AR II* (1912), pp 297-8; Bond *Staff* p 259 suggests Wilson's school of thought mainly involved conscription and support for France. Professor Jeffrey *Field Marshal Sir Henry Wilson* (2006), pp 68-9 emphasises Wilson's stress on common training, education and staff working.

⁷⁷ CPs 2/4/1- ISC 'Memoir for Junior Division' p 1, Capper was stressing principles and the quotation demands the word's insertion.

insistence that campaigns were based on an overall concept demanded a more analytical approach which would in turn require doctrine. The stress on campaigns suggests the operational level. He continued:

We must encourage by all means the power of movement and the mobility of our forces, so that we can by rapid and skilful marches place the enemy at a disadvantage by opposing our full numbers to only a portion of his force.⁷⁸

Haking had already outlined such views, which were similar to Stonewall Jackson's tactics and Chesney's ideas. Robertson later articulated this theme at Camberley.⁷⁹

The GS

The Staff Colleges' development dovetailed with the Esher reforms and the GS's establishment; the combination synergistically improving doctrine and training. The GS' establishment was one, if not the Army's most substantial change between 1897-1914 and the Esher Committee had ambitious objectives for it:

[w]e desired to teach the highest branches of the art of war; we wanted men who could think for themselves and were qualified to form reasoned opinions on the great military questions... We hoped to get hold of our ablest young officers and to give them an intellectual equipment which would fit them for high command and which, as they spread throughout the Army, would help to create a higher standard generally.⁸⁰

The GS would:

as in Germany and Japan, provide the means of raising the intellectual standard of the army... [and] create and consolidate military opinion on sound and generally accepted lines. Such machinery has been hitherto absolutely wanting in our army.⁸¹

Here the extract outlines doctrine's importance, though it did not use the word, but 'reasoned opinions' and 'consolidation... on sound and generally accepted lines' imply it. They continued by outlining how these 'reasoned opinions' were to be disseminated, as well as highlighting the need for greater intellectual effort.

⁷⁸ Ibid 'Lecture on Strategy p 11 underlined in original; Ibid p 16. The last quote also suggests Henderson's comments, WO 27/504 'Strategy.'

⁷⁹ Robertson's quote is at fn 140 below.

⁸⁰ CAB17/14 Clarke/Kitchener 8/8/05.

⁸¹ AFPs 50321 'Esher Co Memorandum' 28/6/05 p 2.

The Japanese Influence

The mention of 'Japan' and the Committee's comment: 'The Japanese have created such a staff, with the result that huge forces have been handled in the field with conspicuous success' shows Manchuria's influence.⁸² Capper, lecturing in Dublin, cited a Japanese officer: 'we attribute the success of [Manchuria] equally to the extreme efficiency of our staff.' Capper continued:

We have learnt our lesson, we have learnt that leading in war means in peace time constant study, reflection, research, keeping up with modern developments, modern ideas, the study for the preparation of the strategical concentration and deployment.'

The Japanese example did not cause the GS to be established but it helped to consolidate it. Rawlinson was convinced of need for higher staff and command training based on his study of the Russo-Japanese War.⁸³ Hamilton also linked Germany and Japan when stressing that staff organisation should be the same in war and peace. Kuropatkin's criticism that the Russian Army lacked doctrine also influenced British military opinion.⁸⁴ Montgomery-Massingberd stressed in his Camberley memoir the need for:

a system thoroughly inculcated into the generals, staff & regimental officers for the whole army, so that all may work together on the same lines. Mutual support & mutual understanding were perhaps the most important features of this system.'⁸⁵

He did not describe this as doctrine and it may be that he was just stressing the structural elements of cohesion, but doctrine, a lesson which others drew from Manchuria, is more likely. This conclusion is suggested by his use of 'system' and the fact that he then analysed training. At Quetta in 1912 and 1913 a Senior Division

⁸² CAB 17/14 'The [GS].'

⁸³ CPs 2/4/4 'Staff Duties' pp 7-8; ESHPs Rawlinson/Esher 7/7/07 'Army Letters Volume 2.'

⁸⁴ RPs 7101-23-220-6 'Comments Draft FSRs 1905;' 'British Army' *EDR CCXIII* (1911), pp 323-4 citing Gen Kuropatkin trans Capt Lindsay ed Maj Swinton *The Russian Army and the Japanese War* (1909), pp 178-80.

⁸⁵ MMPs 2/4 'The Lessons of 1815, 1862, 1866 and 1870 as Confirmed or Modified by the War in Manchuria' p 6.

essay-topic was:

In both the Franco-German War and the Russo-Japanese War the comparative superiority of the “System of Command” and “Staff Organisation” of the victorious army contributed conspicuously towards its success.⁸⁶

This does not point directly at doctrine, though by this time others were emphasising Japanese doctrine as a factor in their success, while doctrine could well be described as: ‘a system of command.’ But the Staff Colleges saw the Manchurian staff lessons as important.

Training and the GS

The AO establishing the GS saw training as one of its major tasks and implied that it would develop doctrine:

3. The functions of the [GS] are to assist ... in promoting military efficiency, especially in regard to the education of officers and the training of the troops and to aid ... in carrying out the policy prescribed by Army Headquarters.
4. With these objects in view, the [GS] will be drawn from the officers of the Army who may be considered most likely to be capable of forming a school of progressive military thought.⁸⁷

Both paragraphs acknowledge doctrine, though not specifically calling it so, but ‘policy’ applied to tactics and a ‘progressive school of military thought’ both imply it. Both also suggest how doctrine was to be spread. Subordinate commands reflected this emphasis on the importance of training as a GS task:

The general system on which [GS] Work (sic) of the [Irish] Command is carried out is that it may assist all ranks... in training for war.

Nine of the Irish BGS’s 12 tasks and 10 of the GSO 2’s 12 involved training. These instructions provide a mass of detail on training, how amendments to *FSRs* and feedback on training were to be generated.⁸⁸ They were modelled on Col Haldane’s Eastern Command instructions. This suggests that other commands similarly emphasised their GS’s training responsibilities. India also accentuated the GS’

⁸⁶ MMPs 4/1 ‘Quetta Orders 1912 22/3/12.’

⁸⁷ AO 233 12/9/06.

⁸⁸ WO 35/56 ‘System of Work GS Irish Command’ pp 2, 13-16.

training role.⁸⁹

Some formations held GS-led 'War Courses' for regimental officers. These covered the tactics of a battalion and battery and stressed teaching senior officers how to train their juniors. Individual pscs could influence their juniors profoundly. Montgomery wrote decades later but his comment which suggests reliance on another does not appear biased. Aldershot Command had for some years encouraged the study of campaigns, providing both lectures and a bibliography for young officers.⁹⁰ Eastern Command established a very thorough training system to prepare officers for the tactical fitness exam. This consisted of a week on paper problems and TEWTS, a week's staff tour and a long attachment to another arm. The source does not state that the Command GS officers instructed but it would seem highly probable that they did. Such instruction shows the far greater attention to professional training than before 1899. The Aldershot and Irish Military Societies continued to flourish and their lectures after 1902 were of higher professional value than those before 1899.⁹¹

The GS reforms made important structural changes at the War Office; two key directors directly under CGS were made responsible for training and doctrine. DSD dealt with doctrine and DMT training policy, while the IGF, not a GS officer, though an important part of the GS system, scrutinised training. It may be felt that the split between doctrinal development and training was unsound, DSD had many other demanding tasks, but despite this drawback, the GS structure gave much greater focus on training and doctrine than before 1899 when the WO was biased toward administration.⁹²

⁸⁹ L/MIL/17/5/1617 p 211; the first Indian Staff Conference stressed it, L/MIL/17/5/1810 pp 21-37.

⁹⁰ WO 279/18 pp 7-8; FM Montgomery *Memoirs* (1958), p 31; WO 279/496 p 57, these were additional to the AMS lectures.

⁹¹ Maj Moore *Notes for the Tactical Fitness Exam* (1907), pp v-vi; Bibliography of Military Societies.

⁹² WO 123/48 AO 233.

The GS Conferences

Wilson originated the GS conferences, held annually at Camberley from 1905 and later imitated in India. These included staff rides, updated GS officers on recent changes, sought ideas and developed doctrine.⁹³ They covered many topics; the 1909 Conference scrutinised Infantry/Artillery communications, divisional frontages, training, to which a day was devoted suggesting its importance, and requisitioning. Some Commands held their own preparatory GS conferences before Camberley.⁹⁴

The IGF

The Esher reforms established the post of IGF, whose responsibilities stressed that:

the methods of training to be adopted shall be such as to ensure uniformity throughout the [UK]; so that units on removal from one command to another may find the same ideals placed before them, the same system in vogue to arrive at these ideals, and may not have to unlearn in one place what they have acquired in another. It will be the first duty of the [IGF] to assist... in establishing and maintaining this uniformity.⁹⁵

Unauthorised normal formations were prevalent before 1899 so establishing uniformity was an important advance, but it was not always achieved. Tactical confusion causes defeat and has often resulted in inferior British tactical performance and poor inter-arm cooperation. French noted that in one command all batteries fire Indirect yet the reverse was true in another.⁹⁶ The IGF would receive many WO reports, which with his own inspections, would enable him to:

report what steps have been taken to remedy any defects... [Y]ou are also requested to remark upon the absence or insufficiency of training... and to call attention to any direction in which military efficiency might be developed.⁹⁷

⁹³WO 33/2747; L/MIL/17/5/1810; The 1909 Conference discussed operation orders; its conclusions were incorporated in *FSRs*. Ideas were sought, WO 35/56 'GS Folder' pp 55-6. WO 32/4731 suggests the 1912 conference was important for developing staff procedures embodied within *The Staff Manual War 1912*.

⁹⁴'1909 Report' pp 3-4; WO 35/56 pp 56-7

⁹⁵ AFPs 50305 'Letter 33/Hd Quarters/91 (MT2) 14/5/04.'

⁹⁶ WO 279/524 reports different tactics. FM Carver *Tobruk* (1964), pp 267-268; WO 27/508 'IGF Report 1908' p 6.

⁹⁷ AFPs 50305 'Letter 14/5/04.'

The institution of a system of generating feedback on lessons learned was important. It may have inspired the lengthy Command annual reports on training which began to be issued at this time. The IGF was also to develop:

a practical and intelligent system of instruction for both Officers and men. Regimental Tours, Staff Rides and War Games which form an integral part of military training should also ... receive close attention.

Systemising practical and theoretical methods clearly provided more effective training than exercises which did not start with theoretical training. Furthermore any doctrine so developed would be more robust. Staff rides often now preceded manoeuvres, increasing the latter's effectiveness, while care was taken with the mechanics of umpiring.⁹⁸ In 1904 the Army Council replied to a point raised by the IGF on artillery's use of cover that *FAT* would be amended consequently.⁹⁹ The IGF's annual reports provide a mass of detail and demonstrate his ability to improve training and alter doctrine.¹⁰⁰

Arm inspectors supported the IGF. Though not all the arm inspectors' posts were new; there had previously been IGCs in both Britain and India, yet by being included in a structure under the IGF, they were better placed to champion change, enforce uniformity and develop their arm's doctrine. The IGC was perhaps the most significant of the IGF's subordinates, as, unlike the RA, which had a far greater institutional base, the Cavalry were regimentally organised. Hitherto they had been without centralised institutions, except a rather nebulous cavalry committee and central depot at Canterbury.¹⁰¹ The new emphasis on training led to the establishment of cavalry schools in Britain and India and the establishment of the *Cavalry Journal*. The 1904 IGC's report demonstrates how defects could be remedied. Later the IGC

⁹⁸ WO 27/503 shows a tour immediately before the Army Manoeuvres; WO 35/56 'GS Folder Appendix C'; Col Forestier-Walker 'Umpiring' (AMS 1910).

⁹⁹ WO 27/491 'Report 1904' p 7.

¹⁰⁰ Ibid 'Report 1906' for ASC recruit training problems and the remedies adopted.

¹⁰¹ WO 27/491 'IGF Report 1904' p 35.

became the designated cavalry divisional commander and trained the division.¹⁰²

Doctrine and Organisations

Doctrine includes organisational issues. The adverse results of uncohesive, poorly structured organisations in 1899 have been examined above. Contrastingly in 1914 brigades and divisions deployed with their peacetime units, staffs and the commanders under whom they had trained. There were defects including the improvised nature of II and III Corps and the Cavalry Division HQs, while infantry divisional staffs were undermanned, but the effects of more cohesion were great. Furthermore far more commanders and staff officers were psc than in 1899.¹⁰³ Consequently they were more likely to know each other and to be aware of common procedures. Here it is worth reiterating that settled structures, commanders who know and are known to their units and who have trained together have a powerful cohesive effect. This is not a substitute for doctrine but forces lacking structural cohesion are less able to use doctrine effectively

The Army's organisation in 1899 for major war was based on the corps-level, with resources, particularly artillery, centralised there. In consequence infantry divisions were under-gunned. That they had only two brigades meant that they were unbalanced as generating a divisional reserve meant splitting a brigade. Divisions were seen as too clumsy in Tirah, after 1899 the corps-based organisation was condemned as inflexible.¹⁰⁴ A corps moving on a single road took some 6-7 hours to deploy into a fighting formation.¹⁰⁵ Roberts recommended that the main formation should be the infantry division or cavalry brigade, though he saw corps as useful

¹⁰² WO 163/10 pp 343-4; WO 163/11 p 157. The Cavalry Committee's minutes do not survive; this conclusion is based therefore on negative reasoning. In 1899 the IGC did not command; in 1914 Allenby did. WO 163/10 pp21,167-8. Baden Powell stated that the old committee had functioned poorly, WO 27/509 'Summary of Results of Winter Training' p 3.

¹⁰³ EDPs 3/7/1 p 4; Tables 2&3.

¹⁰⁴ 'Centurion' 'Shall We Get A Sensible Army?' *NR* XXXVII (1901).

¹⁰⁵ 'Army Organisation' *BA* 82 (1908),p 659.

administratively. Colville was convinced that divisions were the correct formation as corps could not be controlled effectively. Repington argued that the army corps organisation had failed; triangular infantry divisions were more suitable for expeditionary warfare.¹⁰⁶

South African criticisms of the corps-based organisation partly caused the adoption of the large, triangular infantry division in 1907.¹⁰⁷ As a result British infantry divisions in 1914 were better structured than their French or German equivalents. Their organisation into 3 brigades allowed greater flexibility than either the French or German divisions which were primarily divided into two brigades. The British division had one less level of command so that it could react faster. It had more artillery, with greater flexibility due to its mixture of howitzers, heavy and field guns, and more engineers than continental divisions. The British had fewer corps-level resources, but their delegation to divisions enhanced manoeuvrability; time was saved as weapons were available at the manoeuvre-level. But there was a price; delegation diminishes the senior commander's ability to control as assets are lost to him.¹⁰⁸ This weakens overall combat power, particularly in attrition.¹⁰⁹ This purposeful recasting of formations to emphasise the divisional-level suggests both a more doctrinal approach and greater stress on manoeuvre.

But British organisations were imperfect. The Cavalry Division was too large with its 4 brigades and overstretched contemporary C3. That it did not exist in peacetime exacerbated this problem, which, in view of its key role, was a very substantial weakness. But the Germans also improvised their cavalry formations on

¹⁰⁶ *RCWSA Evidence I* p 453; *Ibid II* Q17077-8; 'Suggestions from the Front' /9C XLVIII (1900), pp 86.

¹⁰⁷ WO 163/11 77th Meeting 21/6/06. Divisions had been similarly criticised in Tirah; AO 282/07.

¹⁰⁸ Liddell-Hart stressed that there should be an odd number of subordinate entities. One notes criticisms of Buller's disruption of the chain of command, see Chapter 3, Glossary, Table 30. It was proposed that GHQ would command divisions directly thus eliminating the corps-level. As with the experiment with task forces in the late 1970s, this was proved to be unsound.

¹⁰⁹ Maj Gen Bailey *Field Artillery and Firepower* (Annapolis 2004), p 345.

mobilisation.¹¹⁰

The growth of unit-types suggests the increase in complexity. In 1899 the Army deployed with few types of unit. In 1914 the categories of unit that had to be mobilised were listed over 3 pages and extended from GHQ (1st Echelon) to an Aircraft Park.¹¹¹ This increased complexity had implications for staffwork, making doctrine and training more necessary.

The Doctrinal Works

Introduction

This section analyses the key tactical works issued between 1902 and 1909. Essentially there are 3: *CTrg 1902*, *CTrg 1905* and *FSRs 1909*, the latter foreshadowed by *MAT 1908*. That they were not titled 'drillbooks' suggests more scope for initiative and less rigidity. The Esher Committee saw the manuals as having an important relationship with the GS system.¹¹²

The Key Works

CTrg 1902 was the Army's first modern all-arms manual. Roberts emphasised that the: 'general principles on which the Army is to fight in war will be authoritatively laid down in a work [*CT 1902*] which will concern all branches of the service.'¹¹³ His introduction stressed:

In this manual are enumerated certain principles which have been evolved by experience as generally applicable to the leading of troops in war. These principles, however, are not to be taken as infallible guides. They demand respect, for their violation is often followed by mishap... and they should be thoroughly impressed on the mind of every officer, that whenever he comes to give a decision in the field, he instinctively gives them their full weight. But they are to be regarded as pointing out the dangers involved rather than as precepts to be blindly obeyed. An officer before the enemy, after carefully reviewing the situation, should put into practice those measures which commend themselves to his common-sense, providing always that [they] are in accordance with the spirit of the orders that he has received, that they are

¹¹⁰ 'Mr Haldane and the Army' *QR* 206 (1907), pp 470-1; ED Brose *The Kaiser's Army* (Oxford 2001), pp 155-6.

¹¹¹ *WEs 1898; Regulations for Mobilization 1914* pp 9-12.

¹¹² *RWORC* (Part II) (1904), p 23.

¹¹³ EPs 8704-35 'AG/GOC Aldershot letter 31/10/01;' 'Memorandum to AG 29/8/01.'

calculated to ensure cooperation in the attainment of the [aim], and that good reason can be given for their adoption... [T]his manual is ... authoritative on every subject with which it deals.¹¹⁴

This preface is undogmatic, starkly contrasting with *IDB 1896*'s emphasis on control. Though doctrine is not mentioned directly, *CT 1902*'s emphasis on thought, principles and cooperation clearly suggest it. '[T]hat good reason can be given for their adoption' and 'carefully reviewing the situation' both suggest the need for logical analysis. Unsurprisingly the Army developed the skill of writing appreciations in this period.¹¹⁵ *CTrg 1902* is stated to be authoritative as doctrine must be. *IDB 1896*'s Part V did not mention 'principles' or logical analysis, made little reference to initiative and emphasised control.

CTrg 1902's Sections 1-7 outline a series of principles analysing the arms, though curiously engineers were omitted, particularly view of the 1900 amendment to *IDB 1896*. It stressed all-arms cooperation, firepower, including cavalry's weaponry, QF artillery and the use of ground.¹¹⁶ *CTrg 1902* was written principally by Henderson and expanded by Ellison who consulted the German, Major Balck, accepting his amendments, mainly involving frontal attack.¹¹⁷

CTrg 1905 was similar to *CTrg 1902*, though without Roberts' introduction, and its order was different. There are however shades of difference between the two editions. Both recommended flanking attack where possible, though *CTrg 1905* stressed later deployment, giving more emphasis to covering fire and Infantry/Artillery cooperation.¹¹⁸ Both emphasised Independent Cavalry. Both stressed reconnaissance more than *IDB 1896*. Both envisaged lengthy battles with

¹¹⁴ *CTrg 1902* pp 3-4.

¹¹⁵ Glossary; Lt Col Henderson 'Strategy and Its Teaching' *JRUSI* XLII (1898), Appx II; Maj Cadell 'On Writing an Appreciation of a Military Situation' *PRAI* XXXI (1904-5).

¹¹⁶ *IDB 1896* had been amended to include them, Chapter 6.

¹¹⁷ EPs 8704-35-34 'Proposed contents of General Service Manual Part I & II'; EPs 8704-35-818 pp56, 58. It is possible that Wilson and Rawlinson were involved. Professor Jeffrey suggests that Wilson's involvement was small, Lecture NAM 19/9/07.

¹¹⁸ *CT 1905* p100. But *CTrg 1902* stressed fire superiority, pp33-4.

methodical progress from locality to locality, consolidating captured positions.¹¹⁹

These tactics may have been derived from Buller's relief of Ladysmith or possibly the siege of Paardeberg. *CTrg 1905* had more on artillery than *CT 1902* and described the tasks of each category of artillery. Both stressed counter-attacks, noting that increased firepower allowed more defenders to be reserved for them. Both had a 'Night Operations' section. Tactically the works were similar; the principal difference was one of structure with *CTrg 1905* being better organised.

Both *CTrg 1902* & *1905* recommended careful training, that it was designed for war, and that it was to be systematic, progressive, combining practical and theoretical instruction for all ranks; privates were to be taught so that:

[they] may be able to comprehend the meaning and object of every movement... [Their] individual intelligence will thus be called into play.¹²⁰

The training section is long and stresses realism, thus suggesting the degree of change since 1899. *IDB 1896*, *CDB 1898* and *FAD1896* were far less emphatic on training. This reinforces the link, made earlier, between doctrine and training.

MATs 1908&1909

The next substantial doctrinal documents were the *MATs*, issued from 1908 to report on and influence training. *MAT 1908* explained the basic principles of the forthcoming *FSRs*:

the British Army is...small... and it may conceivably be called upon to face opponents to whom it is numerically inferior. For this reason it is desired to instil ... certain fundamental principles. Perhaps the most important of these principles are the necessity to develop ... the maximum of mobility, to cultivate in the highest degree the art of manoeuvre, and to foster initiative and the offensive spirit. ...[T]he best chance of victory for the numerically weaker combatant, when acting against an enemy who is not inferior in *moral* (sic), arms and training, lies in seeking, by manoeuvre, to cause the enemy to blunder, in order to create and seize a favourable opportunity to attack him.¹²¹

¹¹⁹ *CTrg/1905* p 110; Chapter 5.

¹²⁰ *CTrg 1902* covered training in a separate section published in 1903; *CTrg 1905* p 157; Chapter 7.

¹²¹ *MAT 1908* p 2.

This extract is of great doctrinal importance, accepting that combat's mathematics favour greater numbers, firepower alone could not solve the British tactical problem. Manoeuvre had to redress numerical inferiority. The British had emphasised mobility after South Africa, but, as continental war became more likely, it became more critical in view of their likely numerical inferiority. Haking, a Camberley DS had already stressed at the 1905 GS Conference that:

There is only one course open to the weaker army. It must manoeuvre, draw the enemy into an unfavourable position and then attack simultaneously with all its forces.¹²²

Haking by implication advocated doctrine by emphasising that:

our junior officers should thoroughly understand both the theory and practice of such detachments, so they can act intelligently, ably and without fear ...of doing ...wrong.

Also Haking's very title 'The Application of the Principles of Strategy and Tactics' suggests doctrine was being developed. Haking's lecture links Manchuria to *FSRs*.

MAT 1908 discarded *CTrg 1902* and *1905*'s emphasis on methodical operations. It analysed the training needed to support manoeuvre-based combat, emphasising encounter actions, naturally more likely in mobile warfare. But *MAT 1908*'s endorsement of manoeuvre was not new. Chesney's analysis of mobility had been developed by Henderson's *Stonewall Jackson* as well as South African and Manchurian experience.¹²³ *MAT 1908* also stressed principles, effectively doctrine, emphasised training, its relationship to doctrine and the need for dynamic manoeuvre against an enemy able to react. *MAT 1909* continued the stress on meeting engagements and developing tempo by rapid deployment from the line of march and swift decision-making by commanders who, it stressed, must seize the initiative from the unready. This emphasis on achieving superior tempo is key

¹²² WO 33/2747 p 35, Chapter 8.

¹²³ Chapter 5.

in modern manoeuvre theory.¹²⁴

FSRs 1909

FSRs 1909 remained the Army's most significant doctrinal work in 1914. The Operations volume began similarly to *CTrg 1902*:

The principles given in [*FSRs*] have been evolved by experience as generally applicable... They are to be regarded by all ranks as authoritative... They should be so thoroughly impressed on the mind of every commander, that whenever he has to come to a decision in the field, he instinctively gives them their full weight.¹²⁵

There was no doubt of *FSRs*' doctrinal nature. They stressed initiative similarly to *CTrg*.¹²⁶ *FSRs* contain more general principles than *CTrg 1902* & *1905* and are more logically structured. Most chapters begin with 'general principles,' indeed some sub-chapters start so, thus suggesting their greater doctrinal emphasis.¹²⁷ *FSRs* have chapters on 'Intercommunication and Orders'; a natural combination as communications are necessary for orders' dissemination, this further suggests staffwork's new importance, while 'Movements' was logically placed at the start of *FSRs* and much expanded from *CTrg 1905*. This was a natural consequence of basing doctrine on manoeuvre. Generally *FSRs 1909* emphasise offensive action more than *CTrg 1902* & *1905*, but, compared to French doctrine, their tone is restrained.¹²⁸ This suggests that, though the British were looking more to France; senior officers had made several visits to French establishments, but it was not overwhelming.¹²⁹ The British envisaged defending, though they stressed activity. Similarly withdrawal was not ignored; Robertson stressed it at Camberley. He also emphasised attack, but this was not to be a blind rush.¹³⁰ 4 Division did two

¹²⁴ *BA 84* (1910), p104; *DMO* pp 43, 48.

¹²⁵ *FSRs 1909* p 1.

¹²⁶ Para 13 iii p27 states similarly to *CTrg 1902* the duty to disobey inappropriate orders.

¹²⁷ Eg Chapter 5 S 64 'General principles', while 'Protection ...at Rest' has its own S 75 on principles.

¹²⁸ Combat starts with orders, movement then follows.

¹²⁹ WO 33/2826 'Visit French Artillery 1908;' WO 27/507.

¹³⁰ Maj Gen Robertson 'Final Address Staff College' *AR V* (1913), pp 334-5.

withdrawal exercises in 1913 and it seems likely that other formations practiced them in view of Camberley's emphasis. *FSRs* contained details of meeting engagements. These were not included in *CTrg 1905*, suggesting that more mobile, less positional warfare was expected.¹³¹ In such operations, skill and training had greater opportunities than in attrition. Training was shaped to support this with manoeuvre and meeting engagements, again accentuated in 1909.¹³²

FSRs outlined German versus French tactics. This was stimulated by official visits to France and the GS's translation of *German Tendencies with regard to the Preparation and Development of an Action*.¹³³ This work compared French tactics based on manoeuvre of a large reserve behind a strong advance guard with the more rigid German system of envelopment with fewer reserves. Some soldiers had reservations on cut and dried imitation; JE Gough reemphasised the need to:

see our Army trained to a proper understanding of war, with a knowledge of the advantages and disadvantages of the different methods, and ...to know how and when to apply this knowledge.¹³⁴

Again one notes the stress on principles. Gough's analysis of initiative, orders and the aim in relation to *FSRs* and principles was farsighted. Essentially the difference between the French and Germans involved manoeuvre. The Germans emphasised envelopment, essentially aiming to exploit superior numbers and the strategic initiative.¹³⁵ They stressed constant attack and subordinate initiative but had few reserves. In consequence senior German commanders had less ability to influence events. In contrast the French emphasised manoeuvre behind a strong general advance guard, strong reserves, greater control by the CinC and consequently rather less subordinate initiative. Thus poised they would exploit enemy mistakes.¹³⁶ There

¹³¹ WO 279/535 p 7; positional warfare was being deprecated from 1907; *BA LXXIX* (1907), p 175.

¹³² 'Army Training 1909' *BA* 84 (1910), p 104.

¹³³ Trans GS Capt Culmann (1908). He was a French GS officer.

¹³⁴ 'Peace Training for Command' *AR* I (1911), pp 242,244-5.

¹³⁵ Envelopment featured in Japanese Manchurian tactics being rooted in German doctrine.

¹³⁶ Brig Gen Wilson 'Initiative and the Power of Manoeuvre' (AMS 1910), pp 1-3.

were sound reasons for the British recommending the French system, rather than just imitating an ally. They were numerically inferior but a regular force might hope to offset this:

[s]uperior numbers on the battlefield are an undoubted advantage, but skill, better organization and training, and above all a firmer determination in all ranks to conquer at any cost, are the chief factors of success.¹³⁷

The British stress on human factors was based on Manchuria, British failures in South Africa and partly on the requirements of manoeuvre warfare. Professor Travers has criticised this stress on morale, but manoeuvre demands such qualities and morale remains a principle of war.¹³⁸

Reactive tactics also suited an Army which would be strategically defending, even though its tactics emphasised attack. Unsurprisingly many, including Kiggell, later Commandant Camberley, and JE Gough stressed counterattacks. There was considerable contemporary interest in the battle of Salamanca and counterattacks featured in training.¹³⁹ Counterattacks are a distinctive feature of manoeuvrist doctrine as they enable the initiative to be regained. However there were substantial differences between later French teaching which emphasised attack from the outset, the British saw the need for greater cunning. Robertson outlined how:

The situation may be such that we may be compelled to await a ... better opportunity of dealing with an enemy. For this we may have to march rapidly, lie hidden, deploy very quickly, strike with our whole weight suddenly before the enemy can bring up his, and then perhaps withdraw and avoid the return blow. There is no more difficult operation in war... [It] calls for constant practice.

Here Robertson suggests the importance of mobility and training for manoeuvre

¹³⁷ *FSRs 1909* pp 111-2, 107.

¹³⁸ SHPs 2/5 'The Doctrine of a 'Doctrine' p 5; *The Killing Ground* (1993), pp 67-9; M Creveld *Fighting Power* (1983), p 1 suggests human factors' importance for the Germans between 1939-45; *DMO* p 4-5. Generally manoeuvre combat places greater demands on training, initiative and intelligence; attrition demands sustained courage.

¹³⁹ French 1914 p 9; Gooch *Plans* pp 283-4, 289; 'The Counter-Attack' (AMS 1905); *ANG LIV* (1913), pp 1240-1; Brig Gen May's *Encounter and Counterstroke* (Dublin 1909) is based on a battlefield tour; one division practiced them in 1909. Capt Marindin *The Salamanca Campaign* (1906); Maj Gen May 'Freedom of Manoeuvre' *AR IV* (1913). Salamanca was a counterattack.

warfare, as well as by implication the importance of C3. These tactics were practiced in training.¹⁴⁰

Implicit in British doctrine and Wilson's analysis was manoeuvre. Wilson emphasised that Germans, widely deployed, had: 'no general reserve, and no power to alter plans, and therefore, no power of manoeuvre.' Here it is important to distinguish between mobility and manoeuvre. Wilson stressed:

[i]f... we find ourselves with no superior mobility, unaccustomed to long and tedious marches, ... ignorant of how to requisition, ignorant of how to billet, still served by horse ..., instead of motor traction ... then I am in favour of ... having a Slogging Match (sic).¹⁴¹

Wilson saw how attrition would harm a small professional army fighting a more numerous conscript force which would suffer less qualitatively. Here it is possible to extend his argument to suggest that a small, firepower-heavy army, with consequently less mobility, would have been unsuitable for the type of combat anticipated before 1914. Heavy artillery columns were long, slow and its ammunition ponderous. The pieces were deployed far back in the order of march and would consequently find it hard to engage the enemy in a timely fashion. Clausewitz had also anticipated the danger:

An excess of artillery is bound to cause operations to partake more and more of a defensive and passive character. A shortage of artillery will on the contrary enable us to let the offensive, mobility and manoeuvring predominate.¹⁴²

Professor Travers has criticised the British for downplaying firepower from 1910 when *IT* was altered from: 'the decision is obtained by fire alone' to 'fire superiority makes the decision possible.' His argument is mistaken, both tactically

¹⁴⁰WS Lind *Maneuver Warfare Handbook* (Boulder 1985), p 21; ROBPs 1/3/6 'War' 19/9/13; D Porch *The March to the Marne* (1981), pp 213-5 argues that the French were so divided that they were unable to formulate realistic doctrine, hence opting for all-out attack. The British and French fought very differently in August 1914. The British fought defensively, the French attacked, bands playing and officers in white gloves, Clayton *Paths* pp 20, 28-9. Robertson's remarks clearly echo Henderson's ideas for defeating more numerous foes, WO 27/504 'Strategy' p 1; WO 27/508 'IGF Report 1912' p 78 for an exercise involving withdrawal in contact set by the IGHF; Ibid '1913 Report' p 8.

¹⁴¹Wilson 'Initiative' pp 2, 7.

¹⁴²*FSPB 1908* pp 29-30; a cavalry unit occupied 600 yds, an RFA one 2380. Since a key dimension of columnar movement is time past a point, column length is critical; Clausewitz *War* p 341.

and mathematically, as Chapter 1 and the Glossary argue. Furthermore the British were not notably inferior to other European armies in their proportion of firepower to troops. Indeed at the divisional level, key for manoeuvre, they were superior. The British continued to emphasise the qualitative aspects of firepower: Infantry marksmanship, covering fire and artillery support of other arms down to 1914.¹⁴³

Wilson perceptively analysed command, arguing that the German system weakened their CinC's ability to control. Whether the Germans deliberately downplayed signals cannot be determined here; arguably they felt that doctrine and the Schlieffen Plan would compensate for inadequate communications. In 1914 poor signals capability hurt Germany, despite its advanced electrical industry. In contrast the British, relying on 1899-1902 experience, had invested heavily in communications and had the only separate Signals Service in Europe.¹⁴⁴

Enhanced logistics, motorization and requisitioning improved British manoeuvrability strikingly. Several billeting exercises were held. Despite Professor van Creveld's view that many saw requisitioning as impossible in future European warfare, the British certainly planned to do so to improve mobility.¹⁴⁵ Mobile field kitchens, based on Manchurian reports, were introduced to save time, improve feeding and hence marching. The British emphasised mobility staffwork and march-discipline in the period.¹⁴⁶

¹⁴³ T Travers *Killing Ground* (1993), p 67; Bidwell & Graham *Firepower* p 27; Table 15. The SMLE with its box magazine was superior to the French rifle's tubular magazine. The Vickers was better than the St Etienne machinegun, A Clayton *Paths of Glory* (2003), p 77. British cavalry carried the SMLE rather than a 'pop-gun' carbine. Divisions were the key firepower level in manoeuvre. Corps-level assets were too far back for prompt action. But had British pieces in each division been doubled, they would have naturally been inferior to the Germans in absolute terms. The importance of the divisional level in manoeuvre is that it represents a compromise between coordination, best achieved at higher levels, and responsiveness which is swifter when assets are further forward. WO 27/508 'IGF Report 1911' p 44, Ibid 'IGHF Report 1912' p 10.

¹⁴⁴ M van Creveld *Command in War* (1985), pp 154-5; Maj Priestley *The Signals Service in the European War of 1914 to 1918* (Chatham 1921), pp 5-8. WO 27/508 'IGHF Report 1913' p 53.

¹⁴⁵ Table 16; BA LXXVII (1906), p 586; Creveld *Command*, pp 154-5 and *Supplying War* (1977), p 123; *SIULRs 1911* discussed at the 1911 GS Conference; WO 279/38 'Report Billeting Scheme 1910.' This included using local supplies.

¹⁴⁶ Capt Davidson 'Staffwork with a Division on the March' *AR II* (1912), p 397; the West Yorkshires pioneered march-discipline, EDPs 3/7/1 p 5.

The Continuing Demand for Doctrine

FSRs 1909 were not the last word on doctrine. From 1912 the IGHF's reports include a paragraph entitled: 'doctrine.' Nicholson, the CIGS, stated that:

[the GS's] influence on the Army is especially marked by its having brought to the front certain broad principles relating to training, war organization, the performance of staff duties, higher leading and command.... This REVIEW (sic) is the natural outcome of the creation of our [GS] and it will aim at amplifying and elucidating the general principles.¹⁴⁷

Here, though Nicholson did not mention doctrine directly, it is implicit in his emphasis on principles. He also highlighted the need for study and professionalism; indeed the magazine's establishment suggests the greater importance accorded to theoretical training and disseminating doctrine. Nicholson's links between principles and factors such as organisation confirms the theoretical analysis made earlier in this Chapter.

Nicholson's emphasis on doctrine was continued in two complementary, influential anonymous articles. The first stressed:

A sound, comprehensive, all-pervading doctrine of war is as important to an army as its organisation... [I]n this vital respect the British Army of 1899-like the Russian Army [in Manchuria]... was completely lacking... It is among the first duties of the [GS] ... to indoctrinate [its army] with a clear conception of the basic principles of war.

Both articles were compulsory reading for the Senior Division at Quetta. This being the case, Camberley probably stressed them equally.¹⁴⁸ It is probably more than coincidental that both appeared about the time of *The Army Review*'s foundation. Senior serving soldiers probably wrote both, their professional tone and relevance to an important military issue suggest this conclusion. The articles stimulated some debate including an article: 'The Doctrine of a "Doctrine"' which criticised the current emphasis on doctrine. However French, after taking over as CIGS, reaffirmed

¹⁴⁷ WO 27/508 'IGHF Reports 1912 and 13' both p 6; 'Introduction' *AR I* (1911), p 5.

¹⁴⁸ 'The British Army and Modern Conceptions of War' *ER CCXIII* (1911), p 324; 'The Place of Doctrine in War' *ER CCXV* (1912). Having checked with NLS, it has been impossible to establish the authors; MMPs 4/1 'Quetta Orders' 19/7/12.

that:

assuming that our doctrine is only approximately sound, it is of incalculable benefit to the Army that all its leaders, and especially its higher leaders, should act on the same inspiration, should be guided by identical principles, and should thus feel confident that their comrades ... are inspired by the same governing considerations and seek to attain by common action a common end.

As argued earlier, the want of cooperation between higher commanders in South Africa had damaged performance. French continued:

we must still be catholic enough to encourage the expression of independent and original thought, and we must be ever ready to enfold all that is sound and useful in these new ideas within ... our accepted doctrine ... Between doctrine and dogma there is a wide gulf.¹⁴⁹

It is a formidable analysis of doctrine's importance from an officer heavily criticised for lack of intellectual ability.¹⁵⁰ That successive CIGS stressed doctrine suggests its contemporary importance; that they made the case in the Army's new review suggests the change towards greater intellectual effort and professionalism.

The RN illuminates the Army's interest in doctrine. Corbett outlined the need for doctrine, while progressive naval officers were deeply interested in doctrine and staffwork. They cited the value of doctrine to the Japanese Army in Manchuria and were influenced by Henderson's work, the Army's problems in South Africa and the subsequent changes. That Corbett's key work was entitled *Some Principles of Maritime Strategy* suggests how keen the British were to develop them. In it Corbett suggests the importance of doctrine:

It is not enough that a leader should have the ability to decide rightly; his subordinates must seize at once the full meaning of his decision... For this every man must have been trained to think in the same plane: the chief's order must awaken in every brain the same process of thought.

Dr Gordon analyses Beatty's stress on general principles.¹⁵¹ That Beatty commanded

¹⁴⁹ SHPs attributes this to Gen T Capper; FM French 'Memorandum' AR // (1912), p viii.

¹⁵⁰ R Holmes *The Little Field Marshal* (2004), p ix. Generals may not originate everything that they sign but they remain responsible for the contents. That French repeatedly mentioned 'instinctive knowledge' over many years suggests that this was a personal belief.

the Battle Cruiser Fleet, the fastest part of the Grand Fleet and the one in which the most initiative was needed again suggests the link between doctrine and initiative. This thesis cannot examine the links between the Army and Navy, but that the two Services were both advocating doctrine at roughly the same time shows its importance.

Kiggell, the DSD, gave a backbearing in 1913 on doctrine and its relationship with the manuals:

We know the problems of war cannot be solved by rules, but by judgement based on knowledge of general principles. To lay down rules rather than general principles ... would tend to cramp judgement, not to educate and strengthen it. For that reason our manuals aim at giving principles but avoiding laying down methods.¹⁵²

Here Kiggell, occupying a key post for the development of doctrine, confirms this thesis' identification of the relationship between principles, judgement and doctrine.

Control, Doctrine and the Differences between Military and Civil Methods

At this point it is illuminating to compare the Army's changed methods of command with alterations in industrial control. But caveats must be made as there are deep divisions between the two. First any military force is faced with a number of C2 dilemmas. They must prepare for a state of activity, war, which is profoundly different from their normal peacetime existence as Wavell argued:

In acquiring proficiency the [industrialist] has many advantages... he is "always in the field" while the soldier ...may be compared to a man learning to be an MFH by practice on an electric hare in a riding school.

Here it must be further emphasised that armies are generically less exposed to friction in peacetime than the active elements of navies and air forces.¹⁵³ In peacetime administration tends to predominate in the military and, as Chapter 2

¹⁵¹ *Some Principles of Maritime Strategy* (1911), pp 2-3; 'AX' 'The Executive Command and Staff in Naval Warfare' *NavRev* I (1914), pp 66-7, 70-1. It cited Henderson and poor staffwork in South Africa. A Gordon in W Murray & RH Sinnreich *The Past as Prologue* (2006) pp 162-3.

¹⁵² WO 279/48 p 17.

¹⁵³ FM Wavell *The Good Soldier* (1948), p 28. Wavell used 'politician' in the original. Since this section is examining industry the substitution has been made.

argues, the late Victorian Army was tangled in red tape.

Industry is always in action, although the conditions under which it operates are inherently more benign than combat. Executives are not summarily killed, factories are not liable to destruction and communications, telephones, telegraphs and mail, generally stable state monopolies of growing technical efficiency, were, relative to their military equivalents, invulnerable. Beniger argues that commerce was in the period becoming more centralised with more means of control becoming available. He argues that there was a: 'smooth transition from control crisis to Control Revolution' in industry. One symptom of this change was the creation of large firms: Krupp's, Vickers-Armstrong etc with their horizontal and vertical integration and resulting economies of scale. Another symptom of the change to a more structured system which exerted greater low-level control was the use of time and motion experts, who drained initiative from the coalface employees.¹⁵⁴ This was not the case in the Army which indeed saw the reverse, initiative being delegated downward.

Armies were also experiencing the effects of technical change, though this, in the shape of enhanced firepower, promoted decentralisation and initiative at least when manoeuvre was the desired outcome. Here Chapter 1's analysis of attrition and firepower must be remembered. Contrastingly attrition-based massed firepower, subject to similar forces as industry, economy of scale, or in artillery's case the fact that concentrated fire is more effective than dispersed. Improved communications, less vulnerable for the RA than for other arms, saw, like Industry, control being centralised and therefore pushed up the chain of command in artillery and in

¹⁵⁴ Beniger *Control*, p 291. The control crisis in armies caused by the growth of firepower was not technically solved until the widespread use of RT in the 1940s; Chapter 7.

positional warfare.¹⁵⁵ Interestingly in the Infantry and Cavalry, both slanted towards manoeuvre, the tactical unit emphasised after South Africa was the company or squadron. In both low-level initiative was emphasised from 1902.¹⁵⁶

Here it is worth emphasising that armies particularly have a control dilemma. Manoeuvre demands initiative, delegation and creativity with imposed downward control relaxed, albeit with command direction maintained.¹⁵⁷ Attritional warfare emphasises control and centralisation with command exercised at the highest possible level. Furthermore administration which promotes system, centralisation and uniformity, tends to predominate in peacetime. This further complicates the process of developing the attributes needed for manoeuvre. Also large parts of an army, the logistic corps, have administration as their *raison d'être*. For many logistic personnel, say a clerk in a supply depot, the qualities that are required of them by the Army are essentially civilian and not martial.¹⁵⁸

Transition between manoeuvre and attrition may be fast. One notes Haig's comment in 1918 that it was a commander's duty to take risks which a month before would have been criminal. Perhaps the dilemma was most acute for navies in the period. Jutland demanded that captains adapted from rigid control by Jellicoe to having to show great initiative within a few hours.¹⁵⁹

¹⁵⁵ RA forward communications were equally exposed. But the critical RA higher communication cables, dug in 6 feet of earth, were far less vulnerable. It was these links in static warfare which enabled massive firepower to be applied to areas, even if much fire was misdirected. Gen Farndale *History of the Royal Regiment of Artillery. Western Front 1914-18* (Woolwich 1986), pp 143-4, 156. Artillery centralisation has been taken further in the late 20th Century. There is an interesting analysis to be done between the RN and RAF, both relatively centralised Services and the Army whose teeth arms were decentralised into a regimental system. Theoretically this should have promoted initiative. In practical terms the results have been less impressive.!

¹⁵⁶ Caveats are needed here. Infantry is generically split between the tactical functions of firepower, mobility and for that matter protection, but relative to artillery it has greater mobility on the battlefield. It must also be emphasised that in manoeuvre artillery is decentralised to provide responsiveness at the expense of concentration. Chapters 5, 4 and 7. It should also be noted that the RA continued to allow considerable scope to young officers. Bidwell argues that the gunner system was better at developing initiative than the other arms. Here the Sappers form a possible exception.

¹⁵⁷ Undirected manoeuvre is risky. Ludendorff's failure to control the March 1918 offensive led to exploitation in a direction without strategic value. C Barnett *The Sword-Bearers* (1963), pp 314-6.

¹⁵⁸ Brig Bidwell *Modern Warfare* (1973), p 127.

¹⁵⁹ A Gordon *The Rules of the Game* (2002), Chapters 21 and 22.

Conclusions

Adoption of doctrine from 1902 reflects combat's greater complexity and the imperatives of balancing initiative and control. The process suggests a more intellectual and theoretical emphasis by an Army whose general attitude has been described as: 'complacent anti-intellectualism.'¹⁶⁰ There were problems; some were confused and gave different meanings to doctrine; an example being the stress on French versus German tactics rather than on examining the underlying principles.¹⁶¹ But despite these errors, there is no doubt that there had been a considerable advance in thinking about war's fundamentals. The enhancement of the staff was critical for this and for developing and disseminating doctrine.

Doctrine was instilled in a number of ways, organisational, through manuals in professional literature and by changes to training. The variety of means suggests both the strength of demand for doctrine and that systemic change was occurring. Inculcating initiative was one objective of doctrine but the advantage of having standard procedures, organisations and tactics should not be underestimated. Training was transformed; this encompassed improvements at Camberley, the opening of the Indian staff college, more frequent manoeuvres, changes to basic training, development of training establishments and introduction of new manuals.

The doctrine promulgated in 1908-9 emphasised manoeuvre and mobility, complementing the changes analysed in Chapter 5. It is argued that there were sound military reasons for this and not reactionary social forces. The latter undoubtedly existed in the Army, however. Similar forces caused the adoption of manoeuvrist doctrine in the 1980s.

¹⁶⁰ Clausewitz *War* p 42.

¹⁶¹ A point made by Haig in a 1912 document, cited in J Terraine *The Educated Soldier* (1963), p 49. Haig emphasised adaptability, mobility, manoeuvre and determination rather than penetration or envelopment. JE Gough raised similar concerns, cited above.

Chapter 10 Conclusions

*Things have transpired which made me learn,
The size and meaning of the game,
I don't know when the change began,
I finished as a thinking man.*

Introduction

Hindsight is the prerogative of historians and senior officers; in contrast this thesis has tried to work forward towards 1914 to understand why British tactical doctrine developed in the way that it did. Many mistakes were made judging by the dour, attritional battles fought between 1915-1917, but overemphasising them obscures prewar reasoning. Bloch's forecasts were not of prolonged, attritional warfare but its impossibility. Most experts assumed that any major European war would be short as otherwise nations could not stand the financial or social strains. Thus manoeuvre rather than firepower-dominated attrition predominated across Europe.

The start date of this thesis simplifies complexity. Tactics had begun to alter before 1897, though the rate of change increased from Tirah, further accelerating in 1899. Often the discontinuity in the trend is more significant than the exact point of origin. The process of change was complex, the evidence, slanted towards change, distorts. By weight of evidence this thesis suggests that the reformers' views were reasonably representative, but it may be justly criticised for an attritional approach. Similarly its termination is simplified. *FSRs 1909* were not the last significant doctrinal work; Indirect Fire, pregnant with significance for 1914-18, was not confirmed as the RA's normal means of engagement until 1914.

1902-1914's contexts are important when assessing tactical changes; static budgets from 1904, eroded by inflation, pay increases and costly new equipments.¹

¹ D Stevenson *Armaments and the Coming of War* (Oxford 1997), Table 8; *Statement on the Army Estimates 1914-15* (1914), p 2.

Britain faced a wide array of threats. Diplomacy resolved some, others received little attention, but all potentially distracted from tactical development. The Army had global, expensive commitments, while weapons had to work on the Frontier and in Flanders. The great organisational reforms are another context which diverted attention from tactics.

The Change 1897-1909

The most significant change was that the British adopted a more intellectually coherent system which placed more emphasis on the operational level of war. This was based on doctrine as it would be understood today. There were flaws; failure to list the principles of war officially was one, while the system had little time to bed-in before 1914.² But for an Army till then largely driven by the heroic improvisations demanded by colonial warfare and an empirical national intellectual tradition, this switch towards doctrine was highly significant. The Army's training, education and staff systems altered radically; the relationship between these, tactical change, emphasis on the operational level and doctrine was symbiotic. The GS was needed to create and articulate doctrine; training developed and validated doctrine, whilst combat's complexities, which demanded doctrine, in turn meant that training and the GS were vital. The GS was a strong force for spreading doctrine, vitalising intellectual development and supervising training. Improved soldier and officer education underpinned the whole system.

British doctrine was based on manoeuvre and mobility rather than firepower and attrition. This emphasis, natural in an expeditionary army with a likely semi-independent role, meant that it could thus hope to defeat superior numbers.

Conscription, the only means of redressing numerical inferiority, was practically and

² JI Alger *The Quest for Victory. The Quest for the Principles of War* (Westport 1982), pp 100-2 notes that neither the French nor Germans defined them before 1914.

politically impossible.³ Doctrine emphasised mobile forces, principally cavalry. The British developed their logistics to improve manoeuvrability and were the most motorised army in 1914. All these suggest an attempt to resort to operational level manoeuvre. Greater firepower at the divisional level, key for manoeuvre, supported this.

Modern firepower forced dispersion and thus required increased initiative and ultimately doctrine. Here the contrast between *IDB 1896*'s qualified endorsement of initiative and *CTrg 1902*'s advocacy of it is stark. Firepower made close control impossible, complexity made initiative essential and doctrine steered the latter. Improved administration, education and basic training promoted initiative. That soldier education certificates doubled and that they became mandatory for Service Pay, suggests a major shift in the Army's priorities. Now in dispersed combat soldiers had to read maps. Emphasis on this skill suggests the switch from top-down to delegated tactics. Tactically the stress on skirmishing, scouting and detached duties from 1897 made individual initiative vital. Professor Travers has criticised the Army for over-emphasising human factors, particularly after Manchuria. But the changing conditions of combat with soldiers self-dependent rather than being physically led by their officers, demanded attention to morale and motivation. Now officers had to lead more subtly; one notes the post-South African stress on professionalism and officer responsibility for training. Enforcement altered from the externally imposed towards self-discipline. That courts-martials halved while education certificates doubled suggests that human factors had altered substantially.

The 3 Tactical Factors

The Army's firepower was greatly strengthened; from having the lowest proportion of artillery of the major powers in 1897, the British had almost the

³ Rotating conscripts to and from India within 2-3 years would have been logistically challenging. Conscription was politically problematic, given the rise of the Labour Party.

greatest in 1914. Firepower had also improved qualitatively. There were more howitzers, while Indirect Fire and inter-arm coordination had improved. The weight of shells had increased while the new weapons had longer-ranges. Institutionally the RA had altered, it now stressed divisional artilleries and units rather than batteries as it had in 1897. From 1899 the RA began developing its communications. Scholars have criticised the slow adoption of Indirect Fire. But it was accepted as the normal means of engagement in 1914, while the new QF weapons were developed doctrinally. Both suggest greater analytical effort.

Infantry firepower improved with the introduction of the SMLE and the doubling of unit machine guns. It has been suggested that machine guns were devalued after South Africa; this was not the case. But the most significant change was the replacement of volleys by independent fire. This demanded individual initiative. The Army stressed rapid independent fire at medium ranges to maximise firepower.

The Army strengthened its mobility and manoeuvrability from 1899. There were the raw lessons of South Africa, but the change was also impelled by European warfare's expected conditions and Manchuria's perceived lessons. *MAT 1908* and *FSRs 1909* increased the doctrinal stress on manoeuvre. The development of marching, motorization, animalmastership, requisitioning and billeting shows mobility's importance. But perhaps the most significant change was in the Cavalry. Historically the British Cavalry has been substantially criticised; one notes Wellington's irascible comments, and for a colonially-oriented army, massed cavalry was largely a luxury. From 1902 cavalry training, armament and tactics were thoroughly overhauled. These changes represented increased emphasis on European warfare. The focus of scholarship, the shock versus fire controversy has somewhat obscured the fact that the arm's importance increased in the Army and that the BEF

in 1914 was exceptionally cavalry-heavy. Furthermore these cavalymen had rifles, thus having greater firepower than their French or German equivalents, and marched. Both enhanced mobility; both were eccentric by European standards.

The Army gave far greater attention to fieldcraft, extension, protective duties and engineering from 1899. The British infantry's fieldcraft led Europe; in 1914 British infantry divisions had more engineers of a higher quality than those in continental formations.⁴ Similarly the British were not technologically backward; their Signals Service was the first such European arm. Protection is a less visible factor, if the pun may be excused, than either mobility or firepower. But it was firepower's growth, principally modern magazine rifles, which enforced fieldcraft.

The above paragraphs briefly summarise the 3 tactical factors. In the period of this thesis all increased. Due to the differing characteristics of each it is hard to correlate their relative importance. It is impossible to equate the purchase of motor vehicles with introducing fieldcraft training. The QF programme was a firepower enhancement, yet theory suggests that this would also have increased the Army's mobility. Probably mobility was the factor which increased the most. The emphasis on manoeuvre doctrine and march discipline, the long marches on prewar manoeuvres, the cavalry-heavy composition of the BEF and the development of initiative support this conclusion. But these efforts did not translate into an equivalent increase in the Army's ability to manoeuvre in 1914. Firepower saw the largest equipment programme, the new QFs, while the BEF's shooting shocked the Germans. British tactical protection was generally good in 1914, though there were problems at Le Cateau.⁵

⁴ C Duffy *Through German Eyes. The British Army on the Somme* (2006), p 108.

⁵ Poor staffwork in the BEF in 1914 impaired manoeuvrability, Brig Gen Edmonds *MOFB 1914 I* (1933), pp 120-1. Maxse, a brigadier, denounced staffwork for impairing mobility in 1914, Lt Col Baynes *Far From a Donkey* (1995), p 115, citing Maxse's own analysis. Edmonds *MOFB I* pp 134-5.

There were tensions between the 3 factors in 1914; protection, particularly entrenchment, could not have been developed much further without damaging mobility; much the same applied to firepower, while had the British enhanced mobility further, firepower and protection would have declined. In general the three were roughly balanced in 1914, though there was a slight bias towards mobility.

The Wars

Three wars dominate this thesis, Tirah, Manchuria and South Africa, with the latter undoubtedly the formative experience for the senior commanders of 1914-18.⁶ All posed analytical problems. Two were fought against irregular though formidable foes on terrain atypical of Western Europe, while Manchuria saw a backward army fighting in adverse terrain at the far end of the Trans-Siberian railway against an enemy with unique qualities. The British effort to analyse Manchuria was considerable, though it probably over-emphasised manoeuvre. The lessons, subsequently perceived as heavy artillery, entrenchment, positional warfare and attrition, have been seen as being at variance with South Africa's mobility and manoeuvre. Historians have criticised the British failure to implement what they have deduced as Manchuria's lessons. But for the British, faced with numerical inferiority, mobility and manoeuvre seemed to provide a solution to defeating superior numbers that entrenchment and firepower-dominated attrition could not. Furthermore the discontinuities between South Africa and Manchuria were more visible after 1918 than they were before 1914. Professor Holden Reid has noted that the American Civil War has been reinterpreted at various times as a paradigm of manoeuvre and a precursor of trench warfare.⁷ It is argued that Manchuria has been similarly assessed and then reassessed. Furthermore armies inevitably have to interpret lessons in the light of their own strategy and situation and rather than

⁶ Table 5. Analysis of the annex to the *ALs* listing operational service supports this.

⁷ Professor Holden Reid 'The American Civil War' Lecture IHR 2006.

adopting them uncritically.

The three wars showed many common lessons, firepower, mobility, protection, the enhanced need for doctrine and initiative. The divergences between the wars' lessons were more apparent in hindsight.

The Wider Implications

In the broader historical field this thesis suggests that an organisation which has been seen as anti-technology, anti-intellectual and socially static was in fact altering. The Army's stress on soldier initiative, education and that it planned to commission 2000 soldiers on mobilisation shows that it was less socially rigid than scholars have assessed.⁸ The Army's recruitment of graduates, its attempts to improve civilian education and its switch towards doctrine demonstrate a more intellectual response to problems. Similarly the official promotion of academic research into aeronautics and motorization has implications for understanding Edwardian attitudes towards technology.

However the most significant feature of this thesis is that it illuminates the ideas which influenced the commanders who fought the First World War. Professor Sheffield argues that 1918 on the Western Front saw the birth of operational level combat. This thesis maintains that many of the concepts required for this were developed between 1897-1909. Furthermore Allenby, who served as IGC from 1910-14, fought two of the British Army's most successful manoeuvre battles; Beersheba in 1917 and Armageddon in 1918. The latter, based on surprise, deception, mobility, risk-taking and a commander's concept of striking boldness mounted at the operational level of war, overwhelmed the Turkish Army in Palestine. Horsed cavalry advanced faster and further than the Israeli tanks in 1973, while animal casualties, despite days without water, were minute compared to those sustained

⁸ WO 163/15 21/3/10 pp 1-2.

during the relief of Kimberley.⁹

Last Post

A ship's compass shows the vessel's heading but not the distance sailed over ground. Similarly this thesis does not attempt to measure how far the Army progressed in implementing its new tactics. It is tempting to suggest that the changes constituted a tactical revolution; it is more correct to argue that, between 1897 and 1909 the British switched from tactics rooted in the 18th Century to those which modern soldiers find not unfamiliar. There were precursors, the LI pioneers, whose ideas, analysed by Verner and Henderson, influenced the Army. Strikingly the changes were not just tactical; the Army overhauled its disciplinary, training, educational as well as its command, staff and administrative systems partly to support the altered tactical conditions. Here caveats must be made; society-wide forces were present which would have required adjustments particularly in the fields of pay, discipline and education. This thesis has largely ignored these social pressures. The Army's development after 1900 of education, initiative, doctrine, and fieldcraft had similarities with the LI system. The tactical changes described in this thesis were important but perhaps the most significant was the impact on the Army's culture, the development of professionalism, the combination of and stress on leadership, initiative, education and training, rather than relying, as hitherto, on status and rigid discipline. The effects of this combination were synergistic.

British tactical doctrine matched the expected short war, the Army's strength as a professional force and mitigated numerical inferiority. It could even be argued that that manoeuvre were not carried far enough. The last possibility for victory before entrenchment, physical and mental, meant prolonged attrition was on the Marne. Just

⁹G Sheffield *Forgotten Victory* (2001), pp 245-6; Capt Falls *Military Operations Egypt and Palestine II* (1930), pp 448-452, 641-2. The contrast between the animal casualties in 1900 and 1918 suggests the attention given to animalmastership after 1900, though by 1918 the animals of Allenby's force were acclimatised.

conceivably more vigorous action by the BEF might have led to decisive victory over von Kluck's Army.¹⁰

The British trained for a mobile, short war; they would exploit technology and be supported by considerable firepower. The other European powers equally expected a short war.¹¹ The Germans had more heavy artillery but could anticipate having to assault permanent fortifications. The British hoped to outmanoeuvre their enemies. Criticism of this doctrine may be legitimate for the serving soldier, but demands understanding of contemporary conditions and an attempt not to apply modern mental attitudes anachronistically; here this author may be deemed guilty as charged. For scholars it is no doubt gratifying to castigate Roberts, French, Haig et al for failure to foresee the future. But the legitimate question is whether British tactical doctrine matched the expected type of war? Broadly it did; whether prolonged firepower-dominated attrition should have been anticipated is another question which this thesis does not attempt to answer. All, however, that can be said here is that few contemporaries regarded the results of 4 years of attrition in 1918 as eminently satisfactory. But then as now the future is obscure. Had in 1980 an officer forecast that the equivalent of an infantry division and most of the RN would sail to the South Atlantic, he would have been deemed more suitable for psychiatry than promotion. In 1990 a senior British official categorically stated that in no circumstance would an armoured division be sent to the Gulf. In 2000 anyone predicting that the Army would be soon be engaged in protracted combat in Afghanistan would have been accused of incurable nostalgia for the 'Great Game.' And the rest is history.

¹⁰ Maj Gen Maurice *British Strategy* (1929), p 18; FM Haig eds G Sheffield and J Bourne *Douglas Haig. War Diaries and Letters* (2005), p 69, entry 9/9/14.

¹¹ LL Farrar *The Short-War Illusion* (Santa Barbara 1973), p 6.

BIBLIOGRAPHIES, INDEXES, GLOSSARIES AND TABLES

A great and glorious thing it is,
To learn, for seven years or so,
The Lord knows what of this and that,
Ere reckoned fit to face the foe.

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Annexes

A. Areas for Further Research.

Notes

There are peculiarities in the bibliography of primary books; the most significant being that many works that are historically secondary are, for this thesis, primary as they give direct views on contemporary opinions. Some books on weapons technology outlining scientific principles are treated as primary material. An array of acronyms has been unleashed upon the hapless reader for which the author apologises. A glossary of abbreviations is provided, though some regimental titles may not be included. All books are published at London unless otherwise specified. In citing works by officers in footnotes, the rank held when the work was written has been used rather than the author's initials. The correlation between seniority and sense is inexact, but generally the more senior the individual the greater the influence. Rank therefore provides military context which naturally alters as individuals are promoted. The bibliographies give initials so individual officers are traceable. An exception has been made for officers with the same surname who are cited in close proximity. Official works whose titles include their date of publication eg *FSRs 1909* do not have their date of publication included in chapter citations unless this is different from the title date. Magazine references are sometimes

non-standard as some editors did not include volume numbers and sometimes duplicated page numbers. No index is provided of individual magazine articles consulted for reasons of space. Thesis cited have the university at which they were undertaken listed. Lectures given at the Aldershot Military Society and at the Military Society of Ireland are referred to in the footnotes thus (AMS) or (MSI).

This thesis includes some anachronisms; staff college professors have been entitled DS and brigadier generals commanding brigades are referred to as brigadiers in the text. Cavalry privates are generally called troopers, though this did not become their formal designation until later. Article titles of the Duncan Medal essays in the *PRAIs* have been curtailed to 'Duncan Medal.' As they are sentences long, the change makes citation simpler. Web references are listed in a separate index and are identified by a unique serial number as are contemporary maps.

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⁴ Misdated, clearly written in 1919.

⁵ Facsimile copy of the 1914 edition.

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Col Barry NAM	Maj Gen Barter NAM
Lt Barton NAM	Capt Battine IWM
Brig Gen Beddington LHCMA	Maj Gen Beynon IOL
Gen Buller NA/Devon Records Office	FM Birdwood NAM/IOL
Lt Gen Broadwood NAM	Gen Burnett-Stuart LHCMA
Schoolmaster Cameron NAM (RAEC)	Maj Gen T Capper LHCMA
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Lt Col Clowes NAM	Pte Coles IOL
Maj Crum NLS	Pte (?) Davies IOL
Lt Davies Cook NAM	Maj Gen Davidson NLS
Gen De Lisle LHCMA	Lt Gen Denning NAM
Gen von Donop IWM	Lt Gen Dundonald SRO
Brig Gen Edmonds LHCMA	Brig Gen Egerton NAM
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Lt Gen Hamilton-Gordon RAI	Maj Gen Headlam RAI
Brig Gen Howell LHCMA	Lt Gen Hunter-Weston NAM
Lt Gen Hutton BL	Maj Gen Isaacke LHCMA
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Lt Lawrence NLS	Schoolmaster Leaver NAM (RAEC)
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³ There are several reports on one file.

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3. *Siege of Mafeking. Sketch of typical Boer Field work employed* (Intelligence Division WO August 1900).
4. Capt H Delme-Radcliffe *Military Sketch Map to show Sir R Buller's advance from Chieveley to relieve Ladysmith* (Stanford 1902).
5. Intelligence Division WO 1558 *Spion Kop and Vaalkrantz* Sheets 1&2 (Southampton Ordnance Survey nd)

⁶ All in the British Library

Biographical Index

This Index is designed to provide context for this thesis and is not intended as an absolute record. Consequently some individuals' later careers are not covered. Figures such as Winston Churchill have only those details included that are relevant to this thesis. Manchurian MAs are not recorded here unless they have wider significance, but their details are at Table 28. Civil honours and titles are not recorded unless, like Dundonald, they were acquired during the subject's career. Only military decorations are listed. This Index's material is derived from *Army Lists*, the *Dictionary of National Biography* supplemented by other works in the Bibliographies.

Lt Gen EAH Alderson psc, com Pontius Pilate's Bodyguard otherwise the 1st Foot from Militia 1878, Adjutant MI 1888, DAAG Aldershot 1897-99, served with MI Mashonaland 1896, MI comd South Africa 1899-1900, Brig Gen MI South Africa 1900-1901, IG MI South Africa 1901-03, Comd 2 Brigade 1903-1907, Division Commander India 1908-12, Divisional and Corps Comd 1914-15, Inspector Infantry 1916-

FM EHH Allenby psc, com 6 Dragoons 1882, served in unit South Africa 1899-1900, colm comd 1901-2, Cav Bde comd 1905-1909, IG Cav 1910-1914, Cav Div Comd 1914, Cav Corps then Corps Commander 1914-15, Army Comd BEF 1915-17, CinC Egypt 1917-19.

Lt Gen EA Altham psc, com R Scots 1876, Assistant MS and ADC GOC South Africa 1896-7, DAAG Int Army HQ 1897-99, AAG Int South Africa 1900, WO Int 1901-4, GSO 1 South Africa 1906-7, BGS South Africa 1907-8, Brig Gen Admin N Comd 1908-10, Maj Gen Admin S Comd 1911-15, IG Communications 1915-16, Acting QMG India 1917-

LS Amery graduate of Balliol, fellow All Souls 1897. Correspondent *Times* South Africa 1899-1900, Editor *THWSA*. MP 1911-, served Intelligence Staff France, Balkans, Gallipoli, Salonika 1914-16, Assistant Secretary to the War Cabinet 1916. Later Cabinet Minister. Interested in Army Reform and anti-Buller, thus the *THWSA* has considerable biases, but these are significant in their own right. Amery received much official help in compiling *THWSA* and serving soldiers wrote Volume VI's technical chapters. Amery had good links with many senior officers.

Brig Gen AW Andrew com from NZ Rifle Vols into Devons 1886, IA Cavalry 1889, Lt Col 1912, Bde Comd 1917-.

Maj Gen JC Ardagh psc, passed top into Woolwich from Trinity College Dublin, com REs 1859, present Franco-Prussian War, served Balkans and technical delegate Congress of Berlin, instructor SME 1882 but deployed for Egyptian War 1882, served Sudan 1884, appointed AAG WO for mobilization 1887. Private Secretary Viceroy of India 1888-1895, Commandant SME 1895-6. Director of Military Intelligence 1896-1901, the branch was the forerunner of the Directorate of Military Operations. The DMI was the forerunner of the DMO. Ardagh also served at First Hague Conference. Active in quasi-diplomatic and legal roles after retirement from the Army.

Maj Gen GG Aston psc, com RM 1879, served Sudan 1884, Professor Fortification RN College Greenwich 1896-9, served South Africa 1899-1900, DS Camberley 1904-7, Staff South Africa 1908-1912. Bde Comd 1914. Latter Military Correspondent *The Times*.

Maj BFS Baden-Powell com Scots Guards from Militia 1882, enthusiast for kites, cars and aircraft, served Sudan 1884-5. Served South Africa 1899-1902; used kites to raise a WT aerial there. Editor Army Annual. Brother of:

Lt Gen RSS Baden-Powell com direct into 13 Hussars 1876, served South Africa and later Ashanti 1895; the latter apparently at Wolseley's instigation. Served Matabeleland 1896, CO Dragoon Guards 1897, introducing reconnaissance training. Present in Tirah, SSO South Africa 1899, commanded at Mafeking. Inspector South African Constabulary 1900-02,

appointed IGC 1902. TF Divisional Commander 1908-10; Led the Boy Scouts Movement. This can be seen as part of the post-South African changes. See Bibliography.

General W Balck German officer. Tactical authority, friend of Ellison, corresponded with him and Ian Hamilton and indirectly contributed to *IT 1902*. Senior commander German Army 1914-1918. His son Gen H Balck served as a general on the Eastern Front 1941-5.

Gen EG Barrow com 102nd Foot 1871, IA 1883, DAA&QMG Indian Contingent Egypt 1882, Int Staff 1884-7, AAG India 1897-9, AAG TEF 1897-98, Col on Staff and DAG India 1899-1901, Chief Staff Officer China Expedition 1900-01, Secretary Military Department 1901-03, District Commander 1904-08, Divisional Commander 1908, Army Comd India 1908-1912, Military Secretary India Department 1914-

Capt C Battine com 7 DG from Militia 1887. Retired before South Africa. Sometime Military Correspondent of *The Daily Telegraph*. Corresponded with Allenby during the First World War. See Bibliography.

Maj Gen HM Bengough psc, com 77th Foot 1855, served Crimea, Zulu War, Bde Comd Aldershot 1894-97.

Maj Gen WD Bird psc, DSO, com R W Surreys 1888, served Nigeria 1897, Tirah 1897-8, South Africa 1899-1900, CI School of Musketry 1903-1905, DS Quetta 1905-1909, attended Indian Staff College Manchurian Battlefield Tour, GSO 2 WO 1910-13, GSO 1 WO 1915-16, DSD WO 1916-17.

FM WR Birdwood DSO, qs, com 12 Lancers 1885, IA 1886, Deputy Provost Marshal TEF 1897-8, SSO South Africa 1899-1900, BM South Africa 1900-2, Mil Secretary CinC South Africa 1902, Staff India 1902-09, Brigade Comd India 1909-1912, QMG India 1912, Secretary Army Department 1912-14, Comd ANZAC Corps 1914-15, CinC Mediterranean Expeditionary Force 1915-6, Australian Corps Comd 1916-18, Comd 5 Army 1918.

I Bloch: Russian magnate and financier. His military predictions were more accurate than the soldiers, but his economic and logistical conclusions completely failed to realise that sustained attritional war was practical.

Gen B Blood com REs 1860. Several Frontier campaigns, Zulu War, Egypt 1882, COS Chitral Relief Force 1895, Commander Malakand Field Force, personally shot a ghazi following an attack during a truce, later commanded Buner Field Force 1897-8, divisional commander India 1898-1900, served South Africa 1901. Commander Punjab 1901-1907. Friend of Winston Churchill.

Maj Gen JP Brabazon qs, com 16 Lancers 1862, transferred to Guards, retired 1870, gentleman volunteer Ashanti ranked as Captain, reinstated in the Army, BM Afghanistan 1879-80, served Sudan 1884-5, Winston Churchill's CO 4th Hussars, Comd Cav Bde 1899, Cav Bde Comd South Africa 1899-1900, fell out with French in South Africa over his criticisms of the latter's morals or lack of them. Inspector Yeomanry South Africa 1900. He has been seen as typical cavalry reactionary, though his views on small arms were ahead of his time. Electrified the RCWSA with his advocacy of tomahawks as his preferred cavalry steel weapon, perhaps pour *épater les bourgeois*.

Gen H Brackenbury com Canadian Militia 1853, RA 1856, Served Mutiny, observed Franco-Prussian War, served Ashanti and accompanied Wolseley to Natal 1875 and 1879, Private Secretary Viceroy India 1880-1881, served Ireland 1882 and Sudan 1884-5. Director Military Intelligence 1886-1891. Member Viceroy's Council 1891-1896, President Ordnance Co 1896-99 and Director Ordnance 1899-1904.

Lt Gen RG Broadwood psc, com 12 L 1881, served Egypt 1892-99, commanded the Egyptian Cavalry Omdurman, Cav Bde Cmd and Colm Comd South Africa 1900-1902, Colonel on Staff Natal 1902-1904, Brig Gen Orange River Colony 1904-1906. Commander troops South China 1906-10. Comd 57 Div 1916-17, KIA 1917. Buried at his own request

between a soldier and a subaltern.¹

Maj Gen CED Budworth com RA 1889, Adjutant HAC 1899-1904, served CIV South Africa 1900, Gunnery Instr 1904-1908, CRA 1915, Maj Gen 1916-.

Gen R Buller VC, com KRRC 1858, served under Hawley, a noted exemplar of the principles of Shorncliffe, served Red River Rebellion, attended but did not graduate from Camberley being instead sent to Ashanti 1873, South Africa 1878-9, Egypt 1882, Sudan 1884-5, Special Commissioner Ireland 1886, QMG 1887-1890, did much to found ASC 1888, AG 1890-97, fell out with Wolseley when Buller looked likely to succeed Cambridge as CinC in 1895. Comd Aldershot 1898-9, Comd SAFF 1899-1900, after relief by Roberts Comd Natal 1900. Resumed Command Aldershot 1901, then GOC 1 Corps 1901 but dismissed following an incautious statement to the press.²

Brig Gen JF Burn-Murdoch psc, com 1 Dgns from Militia 1878, BM 1 Cavalry Bde Aldershot 1891-4, Egypt 1894-6, Cavalry Bde Comd South Africa 1900, served till 1902 in theatre. District Comd South Africa 1902-1906.

Lt Gen CJ Burnett psc, com 15th Foot 1863, served Ashanti, BM Afghan Campaign. GOC E District 1896-98, acting QMG 1898, Maj General India 1898-1903, Chief MA Japanese Forces Manchuria 1905. GOC Western District 1907-.

FM JS Byng psc, com 10 Hussars from Militia 1883, DAAG Aldershot 1897-99, PM South Africa 1899, CO South African Light Horse 1899-1900, Commandant Cavalry School 1904-5, Comd 2 Cavalry Brigade 1905-7, Comd 1 Cavalry Brigade 1907-09, Comd TF Division 1910-12, GOC Egypt 1912-14, GOC 3 Cavalry Division 1914-15. Canadian Corps Comd 1916-17, Comd 3 Army 1917-19. Later Governor General Canada then Commissioner Metropolitan Police.

Capt WE Cairnes com Militia 1882, transferred to 3 DG 1884, then to S Staffs, then R Irish Fusiliers, Volunteer adjutant 1897-1902, wrote for *The Westminster Gazette* 1899-1901. Did not serve in South Africa. Secretary of the Akers-Douglas Co and the Remount Co, died 1902.

Maj Gen CE Callwell psc, com RA 1878, served 2nd Afghan War, SC Int WO 1887-1892, BM RA 1893-6, observer with Greek Army 1897, author *Small Wars*, served Natal as BC heavy bty and then mobile colm comd, wrote *Tactics of To-Day*, DAQMG Int Army HQ 1903-4, GSO 1 and Asst Director MO 1904-7, retired as Col 1909, recalled 1914, promoted and served as DMO 1914-16.

Maj Gen T Capper DSO, psc, com East Lancs 1882, attended Camberley 1896-7, Sudan 1898, served Natal 1899-1900 divisional staff, later commanded mobile colm, DS Camberley 1902-1905, Commandant Indian Staff College 1906-1911, toured Manchuria with them. Bde Comd 1911-1914, ally of Hubert Gough, GOC 7 Division 1914-15, KIA Loos.

Col FC Carter com 5th Fusiliers 1878, transferred to R Berks, wrote on Frontier warfare and scouts, served 2nd Afghan War and NW Frontier 1888, 1891 and NE Frontier, Lushai 1889.

Col JE Caunter psc: com 69th Foot 1878. Instr RMC 1898-9, DAAG South Africa 1899-1900, Deputy Commandant RMC 1900-06, GSO 2 1908-11, AAG WO 1911-13.

Col N Chamberlain com Devons 1873, invented Snooker 1875, transferred IA 1876 and served on Roberts' staff 2nd Afghan War, Private Secretary to Roberts South Africa 1900. Appointed to Royal Irish Constabulary 1900. Sacked 1914.

Lt WS Churchill; com 4 Hussars 1895, served Malakand and Tirah 1897-8, attached 21 Lancers Omdurman 1899, resigned 1899, war correspondent South Africa 1899, captured 1899, escaped, com SALH 1900 under Byng. Served in Natal and under Roberts, MP 1900.

Col GS Clarke com RE 1868, served Egypt assessing affects bombardment Alexandria and Sudan 1885, Secretary Colonial Defence Co 1885-92, Secretary Hartington Co 1889-90, Superintendent Woolwich 1894-1901, Member Dawkins Co administrative reform WO,

¹ F Davies and G Maddocks *Bloody Red Tabs* (1995), p49.

² Satirised by Saki 'Alice Lunches in Westminster' *The Penguin Complete Saki* (1982).

Governor Victoria 1901-1903, Member Escher Committee 1903-4, Secretary CID 1904-7, Governor Bombay 1907-1913, wrote for *The Times*, see Bibliography.

Lt Gen CF Clery psc, com 32nd Foot 1858, Camberley 1868-1870, instructor RMC 1871-75 and wrote *Minor Tactics*. Served Zulu War and as BM in Egypt 1882, Staff Gordon Relief Expedition, Commandant Camberley 1888-1893, served WO 1896-99, GOC 2 Division Natal 1899-1900; great reputation as a theorist till the bullets flew.

Maj Gen JT (Talbot) Coke com 21st Foot 1859, fought Canada 1866, Sudan 1888, AAG Ireland 1891-6, AAG then DAG Aldershot 1896-98, Colonel Staff Mauritius 1898-99, Bde Comd South Africa 1899-1900. Acting Divisional Commander at Spion Kop.

Lt Gen HE Colville com Gren Gds 1870. Served Intelligence Sudan 1884-5 and further staff service Sudan 1884-5. Commissioner Uganda 1893-95, comd Bde Gibraltar 1899 and Guards Bde South Africa 1899-1900. GOC 9 Division South Africa 1900, Stellenbosch by Roberts being blamed for Sannah's Post and Lindley disasters. Retired 1901. Killed in a motor accident with Rawlinson 1907.

Col EMS Crabbe com Coldstream Guards 1872, served Egypt 1882, Sudan 1884-5, South Africa 1899-1902.

Maj FC Crum com KRRC 1893, served South Africa 1899-1902, mainly with MI. Later MI instructor, retired prewar and became a senior leader Boy Scouts. Recalled 1914-18

Col WL Davidson com RA 1869, 1900-1901 Col on staff RA, with French for relief Kimberley, Col on staff RA NE District 1901-

Maj Gen L Denning DSO com 75th Foot 1867, Bengal Staff Corps 1871. Served 2nd Afghan War, Sudan 1896, NWF 1897-8, Bde Comd India 1902-. Judging by his papers he was keen on training as a formation commander.

Maj Gen JBB Dickson com Bengal Cavalry 1860, transferred 1 Dgns 1875 then 5 Dgns 1885, SSO Cape 1879, DAA&QMG Nile 1884-5, Comd Cav Bde Northern District 1897-99, Col Staff Straits Settlements 1899-1900, Comd 4 Cav Bde South Africa 1900-

Gen CWH Douglas qs, com 92nd Foot 1869, later Gordons, served 2nd Afghan War and marched with Roberts to Kandahar, served 1st Boer War, DAAG Suakin 1884. BM 1 Brigade 1893-1895, 1898-9 AAG Aldershot, AAG Buller's staff. 1899-1900 Comd 9 Bde South Africa and then colm comd, 1900-01, Comd 1 Bde 1901-2, Comd 2 Division 1902-4, AG 1904-1909, GOC Southern Comd 1909-12, IGHF 1912-14, succeeded French as CIGS 1914, but died.

Lt Gen JP Du Cane psc,³ com RA 1884, staff officer then colm comd South Africa, BM RA 1904-5, GSO 2 DS Staff College 1905-7, GSO 1 War Office 1908-11, CRA 3 Div 1911-12, BGS to IGF 1912-1914, BGS 3 Corps 1914-15, MGRA HQ BEF 1915, Ministry of Munitions 1915-6, Corps Comd 1916-18. CinC Western Command and Rhine Army postwar.

Maj FC Dundas psc: A&SH 1889, DAAG for Instr Scotland 1900-05, DAA&QMG Straits Settlements 1906-10, DAA&QMG 6 Division 1912-1914.

Lt Gen Earl of Dundonald: com Life Guards 1870, served Sudan 1884-5, CO LGs 1895-99 and stressed shooting. Went to South Africa on own initiative and made Mounted Bde Comd Natal 1899-1900. Inventor, a disability which was hereditary. Later commanded in Canada 1902-4. Unpopular with some cavalymen, nicknamed Dundoodle.

Brig Gen JE Edmonds psc, com REs 1881, instructor fortification RMA 1890-96; served Int Div WO 1899-1901, legal adviser 1901-1904, WO monitoring Manchurian War 1904-7, MI 5 1907-1911, GSO 1 4 Div 1911-1914, apparently suffered a mental breakdown in 1914. Served GHQ 1914-18 Engineer Branch, later Official Historian World War 1 1919-49. Nicknamed 'Archimedes' due to his brains, dismissive of lesser intelligences eg Haig.

Col FJM Edwards DSO, psc, commissioned R W Surreys 1881, LA 1883, GSO 1 India 1911-13, Bde Commander India 1913-14. Served Mohmand and Tirah 1897-8, China 1900.

³ Not shown as psc but qualified as being a DS at Camberley.

Lt Gen GF Ellison psc, com 1882 North Lancs, Camberley 1888-9, Staff Capt HQ of Army 1894-98, DAAG Aldershot 1898-9, served South Africa 1899-1900, Secretary Esher Co 1903-4. Private Secretary Haldane 1905-8, Director Organisation WO 1908-11, staff IGOF and BGS Mediterranean Command 1911-1914. MGS Central Force UK 1914-15, Staff Mediterranean Expeditionary Force 1915-16, then admin appointments UK 1916-20. Friend of Balck, worked with Henderson on drafting *CTrg* 1902.

Col FB Emslie com RA 1875, BC howitzer battery Omdurman. Has been heavily and retrospectively criticised for his fire tactics there. DAAG Ordnance 1899-1901, Deputy Asst Director Ordnance 1901-3. President of the Self-Propelled Lorry Trial 1901.

Lt Gen WE Franklyn psc, com Green Howards 1874, CO Green Howards Tirah, Bde Commander 1902-1904, Director Personnel Services WO 1904-6, GOC 4 and 3 Divs 1906-10, MS 1911-

FM JDP French com 8th Hussars in 1874 after RN service 1866-1870 and Suffolk Artillery Militia 1870-1874, served Sudan 1884-5, AAG WO 1895-7, Comd 2 Cav Bde 1897 and then 1 Cav Bde Aldershot 1899. Sent as cavalry commander to Natal and escaped Ladysmith. Cavalry Division Commander SAFF 1899-1900, served South Africa as senior comd 1900-1902, CinC Aldershot 1902-1907, on CID 1905, IGF 1907-1912, CIGS 1912-14, resigned after Curragh, IGF 1914, CinC BEF 1914-1915. CinC Home Forces 1915-18.

Maj Gen JFC Fuller DSO, psc, com Ox and Bucks LI 1898, served South Africa first with unit and then as Intelligence Officer. Served as a TF Adjutant and student Camberley 1914. Served on the staff 1914-18, and as GSO 2&1 Tank Corps 1916-18, GSO 1 DSD 1918-20. Possibly the only British enthusiast of Black Magic to have attained the rank of major general. Wrote extensively on LI as well as on strategical and weapons-related topics.

Lt Gen WF Gatacre psc, com 77th Foot 1862, Camberley 1873-5. Served with Roberts in India 1880s but not part of the Ring. Served Chitral 1895. Divisional Commander Sudan 1898, GOC Eastern District 1898-9. Commander 3 Division South Africa 1899-1900, sacked by Roberts. Returned Eastern Command 1901-3. Nicknamed General Backacher, his orderly who carried his general's pennant was killed at the Atbara at Gatacre's side while the latter was tearing the Dervish zariba down. Gatacre then offered the duty to his staff clerk who declined. Gatacre was astounded.

Gen AJ Godley psc com R Dub Fus 1886, served Rhodesia 1896 MI, Camberley 1899. Appointed Irish Gds 1900, served Mafeking, prominent MI advocate, colm comd South Africa 1900-1902, DAAG MI 1902-1903 and CO Aldershot MI School 1903-1906, AAG and GSO 1 2 Div 1906-1910, GOC NZ 1910-1914. NZ Divisional and then Corps Comd 1914-.

Col JE Goodwyn psc, com 29th Foot, Camberley 1878, DAAG Bengal 1881-6, retired 1897, no war service. See Bibliography.

Brig Gen JRP Gordon com 15 Hussars 1879, Cav Bde Comd South Africa 1900-1901, AAG Cav under IG Cav 1903-1905, Comd 4 Cav Bde 1905-

Gen H de la P Gough psc, com 16 Lancers 1889, served Tirah, South Africa 1899-1902, latterly as colm comd, BM 1 Cav Bde 1902-1904, fell out with Scobell when he was the latter's BM. DS Staff College 1904-6, Comd 3 Cav Bde 1911-14, heavily involved in the Curragh Incident, later Cav Bde Comd BEF, Cavalry and Infantry Division commander 1914-5, Corps 1915-16 and Comd 5 Army BEF 1916-18. Sacked 1918 as GOC 5 Army. One of the very few Goughs not to win a VC. Reputation as a 'Thruster' in both South Africa and France. Younger brother of:

Brig Gen JE Gough VC, psc, com Militia 1890, transferred to RB 1892, served South Africa 1899-1902 and Somaliland 1902-3 and 1909, awarded VC, Camberley 1904-5, DAAG Ireland 1905-6, DS Camberley 1909-1913, BGS Aldershot 1913, BGS 1 Corps 1914, BGS 1 Army 1914-15. DOW 1915.

Lt Col MH Grant com Devons 1892, served Natal staff 1899-1900, DAAG Int SA 1900-1, DAAG Army HQ 1902-5, wrote for *BWM* as "Linesman," later final official historian South Africa. Retired 1909, Lt Col TF.

Lt Col FJ Graves com 20th Hussars 1869, served Sudan 1885, AAG Imperial Yeomanry 1901. Best known for his controversy at the RUSI with Bloch.

Lt Gen JM Grierson psc, com RA 1878, DA&QMG Indian Contingent Egypt 1882, Camberley 1884-5. DAAG Int Army HQ 1890-1894, BM RA Aldershot 1895-6, MA Berlin 1896-1900. Bear-led the foreign MAs in South Africa, then became AAG Roberts HQ South Africa 1900, effectively as principal Operations Staff Officer. Staff Officer on Waldersee's staff China 1900-1901. AQMG then BGS 2 Corps 1901-4, DMO 1904-1906, GOC 1 Div 1906-1910, Commander Aldershot 1910-12, GOCinC Eastern Comd 1912-1914, died on active service 1914 commanding 2 Corps. Victim of many a hard fought battle with knife and fork.

HA Gwynne: chief Reuter's correspondent South Africa, later editor *Morning Post*, had many links to influential soldiers including Roberts and Kitchener. Latterly head of British Union of Fascists.

FM D Haig psc, com 7 Hussars 1885, ADC to IG Cav 1894-5, served Sudan 1898, BM Aldershot Cav Bde 1899, DAAG Natal 1899, DAAG Cavalry Division South Africa 1899-1900, AAG South Africa 1900-1901, Column Comd 1901-2, IG Cav India 1903-1906, DMT 1906-7, DSD 1907-9, Chief of Staff and CGS India 1909-1912, GOC Aldershot 1912-14, 1 Corps Comd 1914, 1 Army Comd 1914-15, CinC BEF 1916-1918.

Lt Gen RCB Haking psc, com R Hampshires 1881, DAAG Cork 1898-99, DAAG South Africa 1899-1901, DS Camberley 1904-06, GSO 1 Scotland 1908-11, GSO 1 WO 1911-14, Bde Comd 1914, later divisional and Corps Comd BEF. Seen as an ineffective corps commander but his *Company Training* was influential.

Gen A Haldane DSO, psc, com Gordons 1882, cousin of Haldane the War Secretary, served DAAG Tirah, fought Elandslaagte and WIA, captured with Churchill 1899 escaped and served SA. Staff Capt and DAAG Int Army HQ 1903-1906. MA Manchuria 1904-1905, GSO 1 WO 1906-9. Bde Commander 1912-1914, Div Comd and later corps commander 1914-18, GOC Mesopotamia post-1918. Made a mesalliance, his wife is carefully not mentioned in his autobiography.

Col Sir Lonsdale Hale psc⁴ com RE 1852, Garrison Instr 1870-1878, Professor of Fortification Camberley 1878-1883, Special Service South Africa 1879. Commentator and analyst, edited Haig's *Cavalry Studies*. See Bibliography. Knighted for his contribution to military science. After his retirement was active at Staff College and RUSI.

Gen Ian Hamilton DSO, qs: com 12th Foot 1872, transferred Gordons. Served 1st Boer and 2nd Afghan Wars. Member Roberts' Ring, friend of White, they were both Gordons. ADC Roberts, AAG Musketry Bengal 1890-1893, Bde Comd Tirah, possibly the first British officer to be x-rayed on operations, keen rifle shot, Comdt Hythe 1898-9, Bde Comd 1898 Mans, tactical commander Elandslaagte and defensive section Ladysmith. Later served under Roberts as comd of corps-sized formation. Corresponded with Maj Balck, British observer with Japanese Army 1904-5, GOC Southern Command 1905-9, AG 1909-10, GOCinC Mediterranean & IGOF 1910-1914. CinC Gallipoli; twice missed a VC, once rejected as too junior and the other too senior; see Bibliography.

Lt Gen A Hamilton Gordon psc, com RA 1880, BM RA Malta 1894-1897, BC and developed Indirect Fire techniques, BC Howitzer Bty Natal 1900, DAAG Int South Africa 1901, Instr School of Gunnery 1901, DAQMG 1 Corps 1901-1904, GSO 1 Army HQ 1904-1908, GSO 1 E Command 1908-1910, DMO India 1910-1914. Maj Gen Admin and GOC Aldershot 1914-1916. Later GOC IX Corps BEF.

⁴ Not shown as psc but qualified as having been a DS there.

Maj Gen AF (Fitzroy) Hart psc, com 31st Foot 1864, served Ashanti, Zulu Campaign and 1st Boer War, Egypt 1882, Brigade commander Aldershot 1897-99 and Natal 1899-1900, South Africa 1901-2; legendarily brave, asked where he could be found, the common view in Natal was: 'in no man's land standing on a rock.' Hart was, however, a cultured soldier who implemented prewar theories on close-order and control. Brother of RC Hart, father of Hart-Synott the Manchurian MA.

Lt Gen RC Hart VC, psc, com RE 1881, Director Mil Education India 1889-1896, Bde Comd India 1896-1901, succeeded Hamilton as bde comd Tirah, a great theoretical student of war but constantly outmanoeuvred by the Afridis.⁵ Comdt SME 1902-1905, GOC Thames and Medway Defences 1905-6, GOC and CinC SA 1907-9, 1912-

Lt Col J Haughton com 24th Foot 1871, transferred IA 1876, Russian interpreter, served as SC Int Division WO 1890-1, CO 36 Sikhs Tirah. KIA 1898 at Shinkamar in the aftermath of Tirah.' Had not seen active service previously.

Maj Gen J Headlam com RA 1883, Instr School Gunnery 1892-1897, DAAG RA South Africa 1900-1902, Asst Director Arty Army HQ 1903-1904, AQMG HQ India 1904-1906, Staff officer then DSD and DMT India 1908-1913, CRA 5 Div 1913-1915. Highly criticised for his command of artillery at Le Cateau, regarded as opponent of Indirect Fire.⁶ Maj Gen RA 1915-1916; historian of the RA.

Maj Gen GM Heath, DSO, psc, com REs 1882, DAAG SA 1901-2, Instr SME 1902-6, GSO 1 India 1910-11, BGS SA 1912-

Col GFR Henderson com York & Lancasters 1878, Instructor RMC 1890-92 and Camberley 1892-1899. Toured US Civil War battlefields when stationed at Bermuda. Noted by Brackenbury and Wolseley, correspondent of Roberts, wrote for *The Times*, Director Intelligence South Africa 1900, evacuated sick after Paardeberg, involved drafting *IT 1902* and *CT 1902*. First historian *BROHSA*. Died 1903.

Maj Gen HP Hickman com RA 1875, many technical and gunnery instructor's posts. Wrote a quasi-official pamphlet on howitzer training in 1900. Served South Africa 1901-2. President of a siege committee formed in September 1914 to prepare for besieging the German Rhineland fortresses.

Maj Gen W Hill com 39th Foot 1866, transferred Bengal Staff Corps 1869, AAG Musketry India 1895-1900, served Afghan War 1878-80, NE Frontier, comd Kurram Mobile Colm during Tirah.

Gen HJT Hilyard psc, served RN 1859-1864, com 15th Foot 1864, later transferred, BM Gibraltar 1878-1882, DAA & QMG Egypt 1882, DAAG Army HQ 1883-89, AAG Aldershot 1889-1891, AAG Army HQ 1891-1893, Commandant Camberley 1893-1898, Bde Comd Aldershot 1898-1899, Bde Commander SAFF 1899-1900, Divisional Commander South Africa 1900, Lt Gen comd Natal 1900-01, Acting GOC 2 Corps 1900-1901, Director Mil Education and Training 1903-1904, GOC South Africa 1904-1905

Col TH Holdich com REs 1862, Chief Surveyor TEF 1897-8, served Abyssinia and other NE and NW Frontier Expeditions.

Col JM Home psc com RA 1886, transferred to IA 1889, Int Staff India 1904-5, Manchuria (Russians 1904), DAAG Aldershot 1904-9, GSO 1 1914-16, AA&QMG 1916-

Gen A Hunter DSO, com R Lancs 1874, served Egypt and Sudan 1884-1899, major general India 1899, COS SAFF 1899 but besieged in Ladysmith, Divisional Commander South Africa 1900-1, GOC Scotland 1901-3, Lt Gen and GOC Southern Army India 1903-8, Governor Gibraltar 1910-13.

Lt Gen AG Hunter-Weston DSO, psc, com REs 1884, DAAG Cavalry Division South Africa and to Lt Gen South Africa 1900-01, mobile colm comd 1901, various staff posts

⁵ NAM 7908-62-1 p 216.

⁶ Maj Gen Bailey in W Murray & RH Sinnreich *The Past as Prologue* (Cambridge 2006), p 193.

1904-14, comd inf bde 1914-15, division and corps commander Gallipoli then France, nicknamed 'Hunter-Bunter,' viewed as a 'dud.'

Lt Gen HD Hutchinson com 77th Foot 1867, transferred IA 1869 served with GR. Served Chitral 1895. Director of Mil Education India 1896-1901, sent to Tirah by White as observer and acted as *Times* correspondent. DSD WO 1904-1907.

Lt Gen ETH Hutton psc, com 60th Rifles 1867, served under Hawley, Zulu War, 1st Boer War and Egypt 1882, Sudan 1884-5, MI expert and trained MI at Aldershot 1888-92, commanded New South Wales 1893-6, Canada 1898-9, South Africa 1900. Commanded Australia 1902-4, Maj Gen Admin E Command 1905-6; served briefly as divisional commander 1914-15

L James Reuters journalist who covered Tirah, South Africa and the Russo-Japanese War, assistant editor *THWSA*, later TF unit CO.

Lt Col WH James psc, late RE author, crammer, tutored WS Churchill and JFC Fuller, lecturer and writer on military subjects.

Gen T Kelly-Kenny psc, com 2nd Foot 1858, served China 1860, Abyssinia 1867-8, GOC 6 Division South Africa 1899-1901, fought Dreifontein, AG 1901- 1904.

Brig Gen FJ Kempster DSO, ADC, com 100th Foot 1875, possibly a protégé of Roberts, served Ashanti 1895-6 and made ADC to Queen, AAG Madras 1897, Divisional Commander not dismissed post-Tirah, but given a damning rating. A contemporary Indian Army saying was: 'Well I'll be Kempstered!' Bde Comd 1914-18.

Lt Gen Kiggell psc, com R Warks 1882, Instr RMC 1895-97, DAAG Instr SE Dist 1897-99 DAAG & AAG South Africa 1899-1902, GSO 2 DS Camberley 1904-1906, GSO 1 WO 1907-9, DSD 1909-13, Commandant Camberley 1913-1914, DMT 1914, Director Home Defence 1914-1915, Asst to CIGS Nov-Dec 1915, COS BEF 1915-18, GOC Guernsey 1918-

Lt Gen FW Kitchener psc, com 14th Foot 1876, served Afghanistan under Roberts, DAAG Instruction Bengal 1891-6, Special Service Sudan 1896-9, CO 2 W Yorks South Africa 1899-1900 then Bde Comd Natal, Div Comd India 1902-07. Brother of:

FM HH Kitchener qs com REs 1871, having visited Franco-Prussian War unofficially. Served Egypt 1886-1899, COS to Roberts 1899-1900, CinC South Africa 1900-1902, CinC India 1902-1909. Agent General Egypt 1911-14, Secretary of State War 1914-16. Probably the most inept tactician to have ever attained a British Field Marshal's baton,⁷ KIA 1916. Nicknamed K of Chaos.

Maj Gen Kitson psc com 1st Foot 1875, transferred to KRRC 1876, Comdt RMC Kingston Canada 1896-1900 and revived it, MA Washington 1900-1902, Commandant RMC 1902-1907, Bde Comd India 1907-1909, QMG India 1909-1912, GOC Division 1912-1914.

Lt Gen H de B de Lisle DSO, psc, com DLI 1883, trainer of polo teams, unique in having piloted the DLI to win the India polo championship to the Cavalry's chagrin. MI and Colm Comd South Africa 1900-1902. Transferred to the Cavalry 1906. GSO 1 2 Division 1910-1, Comd 4 Cavalry Bde 1911, 2 Cavalry Bde 1911-14, division and corps comd 1914-18.

Gen WSA Lockhart com IA 1858, served Abyssinia, NW Frontier, attached Dutch Army Achin various dates 1875-8, served Second Afghan War, Upper Burma, Comd Punjab Field Force 1890-5, Comd TEF 1897-8, CinC India 1898-1900.

Col CJ Long com RA 1870, served Afghanistan comd Egyptian Artillery 1897-1898; CRA Natal 1899 and WIA Colenso; very much criticised for his handling of artillery at Colenso. Also blamed for the armoured train fiasco which saw Churchill captured. Contrary to popular myth, Long's guns neutralised the Boer positions at Colenso without undue casualties before firing off their ammunition. The surviving gun crews were marched off the gunline. Returns show that the casualties were not excessive.⁸ Afterwards served on Lines of Communication.

⁷ WR 4.

⁸ HedPs 'Relief of Ladysmith Folder' 'Extract Staff Diary' p 2.

Gen G Luck com 15th Foot 1858, transferred to 6 Dgns 1861, IGC India 1887-1893, IGC 1893-98; formidable drillmaster of Cavalry, but seen by the critical as no better than a superior RSM. Luck, however, was more than a martinet, and to advance to doctrine, drill is probably a necessary foundation.

FM NG Lyttelton com Rifle Bde 1865, served Egypt 1882, Bde Comd Omdurman 1898 and Aldershot 1899, Brigade then Divisional Commander South Africa 1899-1902, CinC South Africa 1902-1904, CGS 1904-1908, viewed as ineffective see *DNB*, CinC Ireland 1908-1912.

Brig Gen JHA Macdonald: Volunteer officer, comd Forth Infantry Bde, Commandant MVC, correspondent of Wolseley, author *On Tactics*.

Maj Gen N Malcolm DSO, psc, com A&SH 1889. Swinton's predecessor on *British Official History of the Russo-Japanese War*. Edited Henderson's *The Science of War*. DS Quetta and Camberley 1912-1914, GSO 2,1, BGS and MGS 1914-18. Chief of Staff to Gough and had a bad reputation for acerbic comments.

Maj Gen GH Marshall com RA 1861, CRA Artillery Aldershot 1897-9, chief RA officer South Africa 1899-1901, strongly criticised by Roberts after South Africa, Comd RA 1 Corps 1902-4.

Brig Gen AR Martin com from Militia 1874 to 13th Foot, then LA 1877, 5 GR, served 2nd Afghan War, 5 NW Frontier expeditions, AAG 2 Division Tirah and given Brevet Colonelcy.⁹ DAG India 1899-1901, Assistant Military Secretary for IA at WO 1901-.

Lt Col J Masters DSO, psc served 4 GR NW Frontier 1930s. Chindit brigade BM then commander 1944, GSO 1 Indian Division Burma 1944-5, DS Camberley 1946- . Retired and became author in US.

Lt Col FN Maude, psc, late RE author, member The Organisation Society, active at the RUSI, influenced JFC Fuller. Served with volunteers

Maj Gen FB Maurice psc, com Derbyshires 1892, DS Camberley 1913 GSO2 and GSO 1 3 Division BEF 1914-15, selected to head Operations Division GHQ BEF by Robertson 1915, DMO 1916-8. Sacked following his criticisms of Lloyd George 1918, later military journalist and professor Military Studies University of London. Son of:

Maj Gen JF Maurice psc, com RA 1861, winner of Wellington prize essay 1872, served Ashanti, South Africa, Egypt 1882 and Sudan, instructor Camberley 1885-1892, member of the Wolseley Ring. Owned *The USM* from early 1890s until post-1900, involved National Efficiency Movement post-South Africa. Editor *BROHWSA*.

Gen FI Maxse qs, com R Fusiliers 1882, transferred to Coldstream Guards 1891, served Sudan and South Africa, Comd 1 Bde 1910-1914, later Division, Corps Commander and IG Training BEF 1918, later GOC Northern Command; brother of Leo Maxse owner of *The National Review*. Patron of Liddell-Hart. See Bibliography.

Maj Gen ES May psc¹⁰ com RA 1875, Instr RMA 1885-95, served with RHA, DS Camberley 1901-03, GSO1 Mil Education/Training WO 1903-07, Staff Irish Comd 1907-11, Bde Comd India 1913. Div Comd India during 1914-18. See Bibliography.

Lt Gen GF McMunn DSO, psc, qs, com RA 1888, APM South Africa 1900, GSO 2 Army HQ India 1910-12, Deputy Asst Director & Asst Director Remounts WO 1912-15, IG Comms 1916-, later an official historian of the Palestine Campaign.

FM Lord Methuen com Scots Guards 1864, saw Franco-Prussian War, served Ashanti under Evelyn Wood, nominated to Camberley but did not attend. MA Berlin 1878-1880. Served Egypt 1882. Served Bechuanaland 1884-5 as CO improvised unit but saw no combat. Did some work at Camberley under Maurice 1886. 1888 DAAG South Africa and served Rhodesia. GOC Home District 1892-1897 and much involved with Volunteers. Volunteered Tirah 1897 and saw several actions serving as censor. Divisional commander SAFF 1899-

⁹ Brevet Tirah Mil Dept Despatch 19/1899 on L/MIL 3/1091

¹⁰ *QAL Oct 1913* not shown as psc but qualified in light of serving as a DS at Camberley.

1900. Fought Belmont, Graspan, Modder River, Magersfontein, following which he was nearly sacked. Continued to serve in South Africa until 1902. Wounded, defeated and captured at Tweebosch 1902. GOC 4 Corps 1904-5, GOCinC Eastern Command 1905-1908, GOCinC SA 1908-1912, Governor Natal 1910-12 Governor Malta 1915-19.

Lt Gen HSG Miles psc, com 101st Foot 1869, garrison instructor Aldershot 1881-87, DA&QMG Aldershot 1887-8, DA&QMG HQ Army 1893-98, AAG Aldershot 1898-9. Known irreverently as 'Miles the soldier' at Camberley, a pun on the Latin and his lack of war service. Commandant Camberley 1898-99, AAG Corps South Africa 1899, Chief Staff Officer Buller Natal 1900. Sending the Commandant of the Staff College on operations as an AAG suggests that Camberley was not respected. Returned to Camberley 1900-1903, Maj Gen South Africa 1903-1904, Director of Recruiting and Organisation 1904-1908, QMG 1908-.

Lt T Miller Maguire Barrister, military crammer, military lecturer, though he had difficulties sticking to his subject, author see Bibliography. Volunteer officer. Well regarded by some soldiers.

Lt Col AF Mockler-Ferryman com 1876, 43rd Foot 1877, editor *OXLIC*, friend of Verner and did Peninsular Battlefield tour with him. Served RMC 1892-1900.

Gen CC Monro psc: com R West Surreys 1879, Camberley 1889-90, served Malakand and Tirah. BM Gibraltar 1898-9 DAAG 6 Div 1899-1900, Chief Instructor Hythe 1901, Commandant Hythe 1902-. Commander 13 Infantry Bde 1907, 1912 GOC 2 London Div, GOC 2 Div 1914, GOC 1 Corps 1914, temporary Army Comd 3 Army 1915. CinC Mediterranean 1915-16, GOC 1 Army 1916. CinC India 1916-1920.

FM AA Montgomery-(Massingberd) psc com RA 1891, student at Camberley 1905-6, later DS Quetta and Camberley. Served under Rawlinson for most of war as a staff officer rising to MGS. CIGS 1933-36.

FM Nicholson qs com RE 1865, Mil Secretary CinC India 1890-1892, Member Roberts Ring, COS TEF 1897-1898, AG India 1898-1899, Military Secretary to Roberts South Africa 1899-1900, Director Transport South Africa 1900, Director Mobilisation and Intelligence Army HQ 1901-1904, removed after Esher Co. Senior MA Manchuria 1904-1905, QMG 1905-1908, CGS/CIGS 1908-1912. Nicholson did not get on with Ian Hamilton in Manchuria despite the fact that both had been members of the Roberts Ring.

Maj SL Norris RE, com RE 1878, served Egypt 1882.

Lt Gen LW Parsons: comm RA 1870. CO brigade division Natal 1899, acting CRA Natal 1900 and controlled artillery at Pieters. Commandant Salisbury Plain Gunnery Camp 1902-3, IGRA India 1903-1906, Div Comd Ireland 1906-1909.

Maj Gen TD Pilcher psc, com 22 Foot 1879, early advocate of Indirect Fire, DAAG Dublin 1895-1897, West African Field Force 1897-9, Special Service South Africa 1899-1900, MI and column comd 1900-1902 South Africa, Bde Comd Aldershot Corps 1904-1907, Bde Comd India 1907-1911, Div Comd India Jan 1911. Divisional Commander 1914-18

Brig Gen FH Plowden com 43rd Foot 1872, CO OXLI Tirah, WIA, Comd Bde Attock Mans 1900,¹¹ no active service pre-1897. Brigade Comd India 1902-.

Lt Col AWA Pollock: com Somerset LI from Militia 1875, served South Africa 1878-9, Sudan 1885, *Times* Correspondent South Africa 1899-1900, author and contributor to military journals. Recalled to instruct at RMC during South African War, Editor *USM* 1901, Bde Commander 1914-18.

Col TC Porter com 6 Dgns 1872, Cav Bde Comd South Africa 1900-01.

FM HS Rawlinson psc com KRRC 1884, transferred to Coldstream Gds 1892, BM Aldershot 1895-8, served Sudan staff 1898, DAAG and AAG South Africa 1899-1902, AAG Directorate Mil Education 1903, Commandant Camberley 1903-1906, toured Manchuria and Japan, comd

¹¹ L/MIL/17/5/1807 'Report on the Attock Manoeuvres Feb 1900' p 12.

2 Bde Aldershot 1907-9 GOC 3 Division 1910-1914, divisional, comd corps 1914-5 and Army Commander 1915-1918, Representative Supreme Allied Council 1918, Army Comd 1918-19, later CinC India. Protégée of Roberts.

D Reitz: son of the Transvaal Attorney-General. Fought against the British until 1902, then went into exile. Returned and entered South African politics as an associate of Smuts. Fought in the British Army 1914-18 latterly as CO 1 RSF. Prominent in South African politics post-1918. Later High Commissioner in London.

Lt Col CaC Repington¹² psc: com Rifle Brigade 1878, served Afghanistan 1879, Burma, Int Div under Brackenbury, Sudan 1898, MA Belgium and Holland, DAAG South Africa, retired from the Army following a scandal, Military Correspondent *The Times* until 1918, involved with *THWSA*, he aided Amery select the writers of the specialist monographs in Part II of Volume VI,¹³ later wrote for *Morning Post* then *Daily Telegraph*. Inveterate enemy of Henry Wilson. See Bibliography.

Maj Gen M Rimington com 6 Dgns 1881, comd Rimington's Tigers, irregular scouts, 1899-1900, Colm Comd 1901-2, Comd Irish Cavalry Brigade 1903-1907, supporter of the lance,¹⁴ Bde Comd India 1907-1911, IGC India 1911-1914. Divisional commander 1914-16, Comd Reserve Centre 1916-18.

FM FS Roberts VC, com Bengal Artillery 1851, later Bengal Horse Artillery, served Mutiny, served QMG Staff India 1859, served NW Frontier, transferred to RA 1861, commanded Kurram Column 1878, captured Kabul 1879, relieved Kandahar 1880, served South Africa 1881, CinC Madras 1881-1885, CinC India 1885-1893, CinC Ireland 1895-1899, CinC South Africa 1899-1900, CinC 1900-1904. Later served on the CID. 'England's only other soldier.'

FM W Robertson DSO, psc, 10 years soldier service, comm 3 Dgns 1891, IA Int 1892-1896, DSO Chitral 1895, Int Army HQ 1899-1900, DAAG Roberts' HQ South Africa 1900, Army HQ Int 1901-1907, AQMG Aldershot 1907, BGS Aldershot 1907-1910, Commandant Camberley 1910-1913, DMT 1913-1914, QMG BEF 1914-15, later COS BEF, then CIGS 1916-8.

Brig Gen EH Rodwell psc, com 70th Foot 1878, transferred IA 1880, served 1st Punjabis, DAAG Instr India 1897-1901, GSO 1 Army HQ India, Bde Comd 1910-, served NWF 1878-9, 1881, 1894-5. See Bibliography.

Maj Gen C Ross DSO, psc, com R Norfolks from Militia 1884, Div sigs offr SA 1900, DAAG Int SA 1900-02, RMC 1904-8, GSO 2 Camberley 1908-14

Maj LJ Shadwell psc, com from Militia to East Surreys then Suffolks 1882, DAAG Instruction India 1895-1902, PM and special correspondent in Tirah. See Bibliography

Gen Smith-Dorrien DSO, psc, com 95th Foot 1876, served Zulu War, Sudan 1885-6 and 1898, Tirah where he commanded several raids, CO unit and Bde Comd South Africa 1899-1901, AG India 1901-1903, Divisional Commander India 1903-1907, Commander Aldershot 1907-1912, CinC Southern Command 1912-1914, GOC 2 Corps 1914. Comd 2 Army BEF 1914-15, fell out with French, sacked 1915, Robertson broke the news to him thus: 'you're for 'ome 'Orace.' Later CinC East Africa.

Maj Gen ED Swinton DSO, com RE 1888, instructor SME 1896-9, served South Africa 1899-1902 as adjutant and then CO engineer unit, edited *British Official History Russo-Japanese War*. Secretary of the Wood Co on REs 1906. Member The Organisation Society.¹⁵ Later official correspondent 1914-5, involved with tank development and CID.

Maj Gen AW Thorneycroft com 21st Foot from Militia 1879, then RS Fusiliers, rode 20 stone, Army racquets champion, machinegun enthusiast. DAAG Natal 1899, then raised and commanded Thorneycroft's MI. He spent some £ 1200 equipping this unit, presenting it with

¹² Often referred to by his previous surname of À Court.

¹³ Ed LS Amery *THWSA* VI (1909), pp vi, viii.

¹⁴ WO 32/6782 Rimington Memorandum 'The Arms of the Cavalry.'

¹⁵ *The Organisation Society Constitution and Rules* p 12.

2 machineguns. Appointed to command on Spion Kop at Buller's suggestion. Commanded mobile colm and later a group of colms 1900-02. AAG 7 Division 1902-05, Brigade Commander 1905-09, Later a TF Divisional Commander 1911-

Maj Gen HF Thuillier com RE 1887, Bde Comd 1915-16, Special Appointment 1916-17, Ministry Munitions 1917-

Maj Gen J Vaughan, DSO, psc. Com 7th Hussars 1891. Did his staff college exam in polo kit, an event of such frequency that one suspects it was de rigeur for the cavalry bloods. Served in South Africa as a staff officer under French and then as a BM of a brigade. Fell out with Scobell in 1904 and resigned as his BM over the latter's inattention to detail and training. Commandant of Cavalry School 1911-14 and thus had the shadow post of GSO 1 of the Cavalry Division. His performance in 1914 has been severely criticised. Though it is possible to suggest that Vaughan's personal priority was pig-sticking, he was keen on training and competent staff officer who faced a hard task coordinating unruly brigadiers with inadequate communications. Promoted to command first a cavalry brigade 1914 and then a cavalry division.

Col W Verner psc, com from Militia 1873 to 18th Foot, RB 1874, Editor *RBC*, DAAG Instr 1885-1892, RMC Instr 1896-1899, DAAG Topography South Africa and SO under Methuen in South Africa 1899; invalided after his horse rolled on him after Graspan. Historian of the RB. Friend of Henderson and Mockler-Ferryman. Did several battlefield tours.

Brig Gen B Vincent psc, com RA 1891, served South Africa BM, Observer Manchuria (Japan) 1904-5, transferred to 6 Dragoons 1908, DS Quetta 1910-11 but dismissed probably for health reasons, he suffered from 'gunner ear.' Later toured Manchuria with Barrow. Served as a senior staff officer 1914-18 and is unique in being praised by Fuller who served under him. Later Bde Comd.

Col H Vincent MP and volunteer officer, prominent at RUSI.

Col BR Ward com REs. 1882, Instr RMA 1897-1900, Instr SME Member of the Efficiency Movement.

Gen C Warren attended Sandhurst and passed exam for Woolwich while there. Com REs 1857, served Palestine, South Africa 1876-80, Bechuanaland 1884-1885, Sudan 1886, Commissioner Metropolitan Police 1886-88, criticised for his failure to arrest Jack the Ripper and for insisting on muzzling dogs. Commander Straits Settlements 1889-1894, fell out with the Governor, GOC Thames District 1895-1898, commanded division in 1895 Manoeuvres. GOC 5 Division SAFF 1899-1900, his force attacked Spion Kop, Military Governor North Cape 1900, held dormant commission to take over as CinC if Buller was incapacitated. Had a reputation for being difficult, allegedly put Churchill in arrest at Spion Kop, summarised in a contemporary jingle.

Now Buller devised an unworkable plan,
That he handed to Warren an obstinate man,

Brig Gen WHH Waters psc, com RA 1875, SC Int WO 1891-93, MA Russia 1893-97, DAAG Int 1897-99, DAAG South Africa 1899-1900, MA Berlin 1900-1903, MA Manchuria with Russians 1904. Later commanded in China. See Bibliography.

FM AP Wavell MC, psc: com BW 1900, served South Africa, att Russian Army and interpreter, involved with *British Official History Manchuria*. GSO 3 WO 1912-14, GSO 2 HQ BEF 1914, WIA as BM 1915, Later commanded an experimental infantry brigade, Division, Palestine, Southern Command, CinC Army Middle East, CinC India, Viceroy. Formidable record as trainer of troops.

FM GS White VC, com 27th Foot 1853, transferred to Gordons, served Afghanistan 1879, won VC, member Roberts Ring, friend of Ian Hamilton, they were both Gordons, served

Egypt 1884-5, Bde Comd Burma 1885-9, CinC India 1893-1898, QMG 1898-99, Comd Natal 1899-1900, besieged Ladysmith, Governor Gibraltar 1900-1904.

Lt Col CH (Holmes) Wilson¹⁶ com RA 1890, CO TF Field Artillery unit 1911-, served Natal 1899-1900. Prolific if not particularly profound writer on artillery.

FM HH Wilson DSO, psc, com from Militia to Rifle Bde 1884, Int Army HQ 1895-7, BM Aldershot 1897-1899, BM Lyttelton's Bde Natal 1899-1900, Staff Roberts' HQ 1900, HQ of Army 1901-2, DAAG then AAG Training DME and GSO 1 Directorate of SD WO 1903-1906, Commandant Camberley 1907-1910, DMO 1910-1914, Sub Chief GS BEF 1914, GOC 4 Corps, and several liaison posts, CIGS 1918-1922, MP 1922, assassinated. Developed links with Foch during his time at Camberley. Rival of Rawlinson, enemy of Repington, protégée of Roberts. Regarded as a politician and too slippery by half; involved in the Curragh Incident.

HW Wilson; commentator and author on military and naval matters.

FM GJ Wolseley com 12th Foot 1852, served Crimea, Mutiny, China, Canada and visited US Civil War, led Red River Expedition 1870, Ashanti 1873-4 where he formed the Ring, served South Africa 1875, Cyprus 1878-9, South Africa 1879, QMG 1880-82, AG 1882-1890, interrupted by service in Egypt 1882 and the Sudan 1884-5, Irish Command 1890-1895, CinC Army 1895-1900. Rival of Roberts, probably distrusted Buller from 1895 when the latter looked as if he would be the next CinC. 'England's only soldier.'

FM HE Wood VC, psc, served in Crimea with RN, transferred to Army and com 13 Light Dragoons 1855, served Mutiny, Ashanti, called to the Bar 1874, served South Africa 1878-79, served 1st Boer War, Egypt 1882, Sirdar Egyptian Army 1882-5, Commander Colchester then Aldershot 1886-93, QMG 1893-97, AG 1897-1901, Commander 2 Corps 1901-1904. See Bibliography.

Maj Gen E Wood com REs 1864. CRE Malta 1894-99, CRE South Africa 1899-1902. Viewed as lacking ability by Roberts.

¹⁶ Often referred to as Holmes-Wilson.

Glossary of Terms

This thesis contains a number of technical military terms; this Glossary explains the most important.

A: this describes either the AG's staff branch which dealt with personnel matters or the issues themselves such as discipline, manning etc. Formally the A staff were established with the G or General Staff.

Animalmastership: the care of beasts to ensure their military effectiveness.

Appreciation: an estimate, based on logical analysis, of the best course of action in a given situation. Appreciations were introduced to the British Army before 1914.¹

Artillery Superiority: there are two dimensions to be considered in assessing artillery superiority. The first is the absolute scale of attack in terms of weight of shells fired into a given area. For example had the British had one piece in South Africa and the Boers none, though their ratio of superiority relative to the Boer artillery would have been infinite, it would have been immaterial due to the country's vast area. This probably explains Lanchester's surprising claim that artillery was ineffective in South Africa due to the open terrain there. In fact open terrain favours long-range weapons as their fire and observation is unobstructed. Artillery is at a tactical disadvantage in jungle or urban warfare. The relationship between weight of attack and area is significant as it affects neutralisation and destruction of defences and defenders. Artillery in and just after this thesis' period was undergoing a profound switch. Until the introduction of Indirect Fire, artillery fired to hit. But when this was introduced the effect of weight of fire became more important as hitting a point target became much harder and therefore areas known or suspected to hold enemy increasingly became targets. This may explain Lanchester's comment.² The ratio between pieces on either side is important for CB where tactical conditions are equivalent. But, as Roberts emphasised when recommending dispersion of batteries, tactical conditions were changing.³ The introduction of smokeless ammunition made locating pieces even firing Direct hard. It is also possible to suggest that this ratio was becoming less important as Indirect Fire was adopted. Using the latter required skill, thus crude superiority was less important. However, in some situations it is possible to blanket areas with Indirect CB fire.

Artillery Formation: an arrangement of small columns in a chequered formation designed to reduce casualties from shrapnel by making ranging difficult, while ensuring that dispersal was maintained. It was introduced after 1905 and was probably inspired by MA reports from Manchuria.

Attrition:⁴ the defeat of an enemy by firepower at primarily the tactical level. In attritional land warfare combat tends to be more positional than in manoeuvre and is generally slower in tempo. Casualties over sustained periods of attrition are likely to be greater than in manoeuvre combat. The latter is not, however, cheap, when the forces are matched. But many manoeuvre battles there have been wide disparities of both skill and casualties between the victor and vanquished. In COMPASS and in SICHELSNITT, the winning side had substantial advantages in mobility, in command, in tactics and arguably in technology. In many manoeuvre battles the manoeuvre force has been

¹ Maj Cadell 'On Writing an Appreciation of a Military Situation' *PRAIs* XXXI (1904-5). However, though this is the first guidance on writing them, they were probably taught at Camberley before.

² FW Lanchester *Aircraft in War* (1916), pp 86-7. Jungle warfare, involving very close-range combat, inhibits artillery, *AFMI* (1985), pp 89,94. Chapter 6 examines Lanchester's deductions on fieldcraft.

³ RPs 7101-23-124-3 F646 21/11/02; Chapter 4.

⁴ EN Luttwak & S Koehl *The Dictionary of Modern War* (NY 1991).

inferior in overall numbers.⁵ This was the case in both the operations cited. Numbers were more event in the latter but the Germans were a monolithic force fighting a multilingual coalition, there was an element of practical numerical parity.

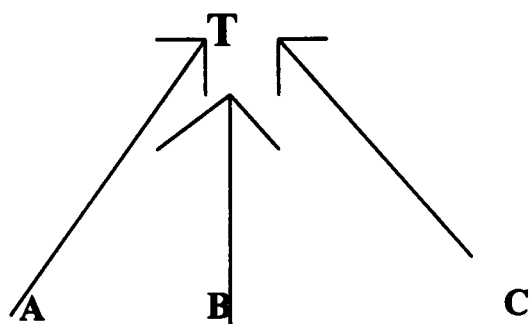
Battle Procedure: a system whereby concurrent activity allows time to be used to best effect. A simple method is to let commanders move ahead of their units. This allows time for prior reconnaissance.⁶ One of the advantages of Double Companies was that their OCs were mounted and thus capable of reconnoitring ahead of the main body of their sub unit. The same argument was made for authorising machinegun officers to be mounted.⁷

British: this thesis uses British to represent all forces of the Empire. The exception is in Chapter 2 where distinguishing between British and Indian troops is important; here Imperial is used when a collective description is needed. This thesis follows the practice of many contemporaries from Australia, Canada, New Zealand etc.

Carbine: a shorter ranged, lower velocity firearm with an inferior performance to a rifle. Carbines were carried mainly by cavalry, thus putting them at a disadvantage to infantry when fighting dismounted.

Converging Fire: tactically such fire is more likely to enfilade the target (T) and it concentrates the firepower of dispersed weapons. Longer-ranges made converging fire more effective. Return fire from T diverges and is thus disadvantageous. Spion Kop demonstrated converging fire's effectiveness.

Figure 1 To Show Converging Fire



Fire converging from A,B&C is more effective than T to ABC, this scatters and there is less chance of enfilade effect.

Covering Fire: fire designed to cover friendly movement or other exposure. Covering fire is a basic tactical principle established in the period. It will not necessarily inflict casualties unless the enemy are forced to expose themselves ie by infantry advancing. Fire unsynchronised with movement wastes ammunition as the enemy quite simply ducks into their trenches and may prejudice surprise. This occurred in several battles in 1899-1900. 'If not cover from fire, then cover by fire.'⁸

CRE: the position of the CRE before and during South Africa was difficult. He was treated as purely a technical adviser. This made it harder for him to coordinate engineer operations with other activity.

Dead Ground: ground into which observation or aimed flat-trajectory fire is impossible. 'Dead ground, live soldiers.'⁹ In Figure 7 there is a considerable area of dead ground at the foot of the kopje. But artillery can fire into dead ground using Indirect Fire providing its trajectories permit.

⁵ Brig Playfair *The Mediterranean and Middle East I* (1954), pp 362-3.

⁶ Lt Col Bethell *Modern Guns and Gunnery* (1907), p 176.

⁷ Chapter 4.

⁸ Tactical maxims Lt Col, later General W Walker Burma 1944 cited in *A Child at Arms*

⁹ Ibid.

Deliberate Method: the use of ground and cover by artillery to reach a gun position with minimum exposure and with less emphasis on speed than in the Direct. The former method gained importance in South Africa as detecting guns firing smokeless ammunition, even when using Direct Fire, was hard. Pre-1899 the RA put great emphasis on dashing movement into action, sacrificing concealment for speed, using the Direct Method.¹⁰

Depth: in attack depth of formation facilitates manoeuvre as problems of controlling movement in a linear formation, illustrated at Outflanking below, are avoided. A shallow formation, A-B, is more or less committed when meeting the enemy at C-D. A deeper formation, E-F, at worst is likely to only have troops at E pinned down, leaving the main body, F, free to manoeuvre. Theoretically F's columnar formation may facilitate this. If troops at E can take fire positions along A-B their fire may pin the enemy and prevent them reacting to outflanking moves to G or H. In defence depth allows the defender time to react and enables him to surprise the attackers who encounter troops whose existence ground based-reconnaissance has been unable to detect.

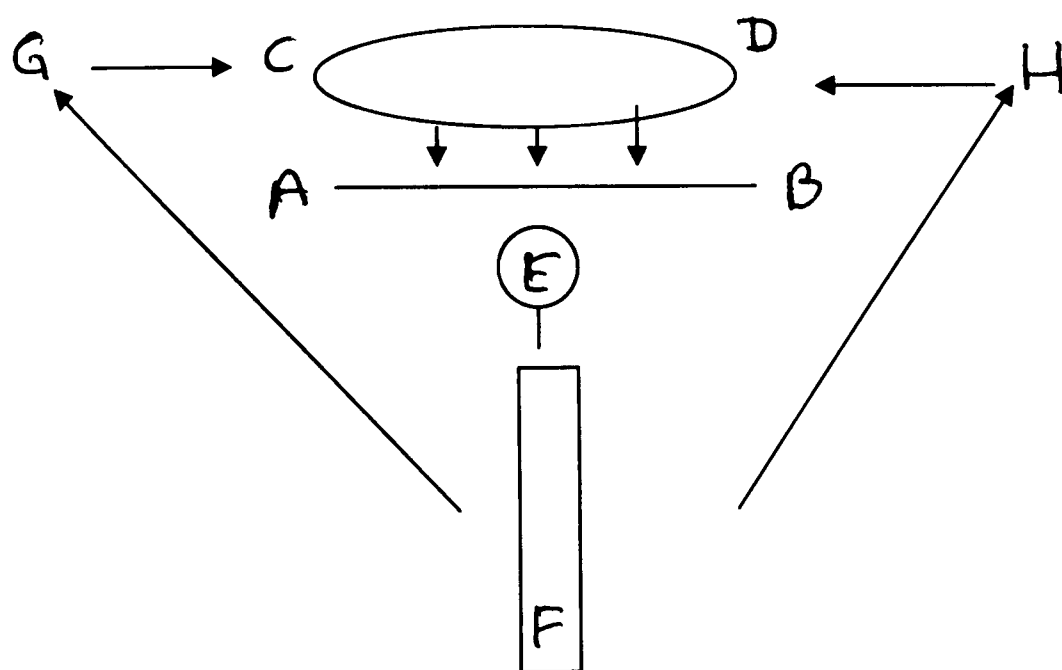


Figure 2. To show depth in manoeuvre.

Destruction: far more artillery ammunition is necessary to destroy rather than to neutralise defenders and defences. Typically heavier weapons are needed if destruction is to be effected speedily.¹¹ Weeks of fire may destroy defences but the ensuing devastation hinders movement and creates many craters which serve as excellent improvised emplacements. Destruction demands HE ammunition which is less effectively delivered by guns than it is by howitzers

Detached Duties: patrols, pickets, outposts, scouting, reconnaissance and similar tactical tasks which, by virtue of their widely dispersed nature, demanded subordinate initiative. In shock action cavalry were concentrated and less initiative was needed.¹²

Direct Fire: the layer can see the target through his weapon sight. Till after South Africa most guns were designed for Direct Fire by virtue of their relatively flat trajectories and fixed ammunition which was predominantly shrapnel in the major European armies. Traditional tactics massed guns firing over open sights in long lines to obtain concentration of fire by the firing pieces' physical proximity. Theoretically C³ may be easier, but passing orders down a line of weapons which are firing and probably

¹⁰ *FAD 1896* p 15 defines the Deliberate and Direct methods.

¹¹ VDPs 69/74/1 *The Supply of Munitions to the Army*, letter 20/12/14 Smith Dorrien/von Donop.

¹² Brig Gen Rimington *RCWSA Evidence II* Qs 12729-30.

under attack themselves is challenging. There is also the question of target indication to every individual gunlayer. When targets are at greater ranges, target indication is hard when firing Direct. Firing Indirect the target is simply a bearing and elevation, thus physically designating the target to individual gunlayers is unnecessary.

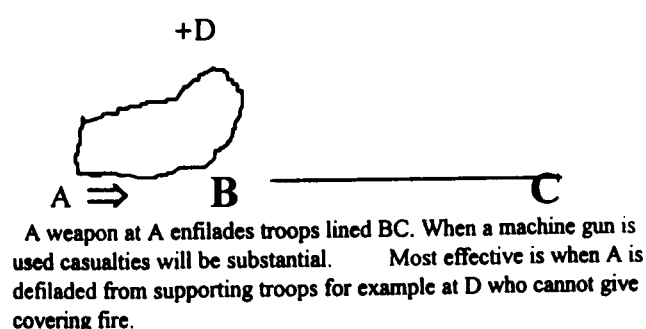
Director: an instrument designed to provide angles of fire to artillery pieces firing Indirect.

Double Company: until just before 1914, British battalions were divided into 8 small rifle companies, usually commanded by a captain. This was argued to have benefits in small wars by ensuring that there were many sub units and thus increasing tactical articulation. The drawback was that their commanders were relatively junior and in peacetime their OCs' initiative was restricted. Furthermore in Britain company strengths were so small, sometimes as little as 20-30 men, that realistic training was impossible in peacetime. By doubling the size of the company this disadvantage was partly overcome.¹³ As the double company commanders were somewhat more senior, usually majors, they were more likely to be allowed initiative. Another advantage was that the career pattern was improved and the gap between becoming a company commander and CO was less. Organisationally the companies were stronger with a 2ic, CSM and CQMS. Furthermore command was eased as the CO had only to deal with 4 and not 8 OCs. Double company organisation facilitated battle procedure. Double companies were adopted in the Indian Army first, but they were often used in training in Britain from 1902.

Drift: South African for a ford. Usually drifts formed bottlenecks for vehicles as their approaches were often steep and narrow. This made it necessary for engineers to start work on them as soon as possible.¹⁴

Enfilade: the tactical maxim is: 'enfilade fire from defilade positions.'¹⁵ In the Figure 3 A is defiladed from D. This maximises protection from enemy covering fire. In turn A enfilades enemy troops at B-C. It is particularly effective when machineguns are used as their cone of fire may cover right down the line B-C.

Figure 3 To Illustrate Enfilade



Longer ranged weapons increases the effect as there are more positions from which defences can be enfiladed.¹⁶

Extension: either the distance between elements of a force or troops or the act of deploying, typically from marching to fighting formations. Generally armies manoeuvre in column and fight in line. The transition is critical, as premature deployment causes delay, while late deployment is lethal. In tactical extension between individuals hard and fast rules are impossible to prescribe definitively. Generally a more extended formation allows ground to be used for cover more effectively than a close formation. But at night or in very dense cover the latter may be necessary and in some cases a close formation may enable ground to be used more effectively. Generally when a close formation is

¹³ *RCWSA Report* (1903), p 56 outlines the organisational benefits and describes the RA's system.

¹⁴ Maj Gen Maurice *BROHSA* (1906), Glossary for all South African topographical words.

¹⁵ WO 1 (RSM) J Davey 15/10/70.

¹⁶ Maj Gen Swinton *The Defence of Duffers Drift* (Dehra Dun nd), pp 40-1.

used, subordinates have no need to decide how best to use ground and little initiative. It is a perennial feature of poorly trained troops that they find difficulty in fighting in extended formations. This is true of New Army units on the Somme, German students in the *Kindermord* or Russian conscripts in Manchuria in 1904-5 or in 1941.

False Front: a deployment of troops in a position forward of the main defensive line designed to deceive the enemy and make him waste time and ammunition in assaulting a position from which the defender has withdrawn. The overall effect is similar to putting one's foot on a non-existent step. Smokeless ammunition naturally made using false fronts easier.

Field: a term used to distinguish between weapons used in field combat and those deployed in siege warfare.

Field Artillery: a generic term for artillery that usually supported Infantry or Cavalry ie the RHA and RFA. The 4.7", 5" and 60 Pounder Gun batteries were heavy artillery manned by the RGA, generally used for formation tasks. Horse artillery, the RHA or RFA are referred to specifically when the distinction is important.

Fieldcraft: the use of ground, extension, cover and concealment for protection and surprise to enable unscathed movement or fire. Fieldcraft blends into low-level tactics. Smokeless ammunition made fieldcraft much easier. It is important to note that movement makes objects significantly easier to detect. When static objects are exposed at a distance frequently they cannot be detected. The general effect of smokeless ammunition and long ranges was to aid the defence and to increase the importance of initiative.

Field Firing: this involves the combination of fieldcraft and shooting in a simple tactical setting. Such field firing takes place on a range representing real country, or even in countryside cleared specially for firing. This is unlike less advanced shooting which uses a gallery or equivalent range.

Figure of Merit: an average, usually applied to annual range firing. Because the Figure of Merit was published Army-wide and performance reflected on the unit, artificialities were encouraged. This particularly applied to shooting.

Fire and Manoeuvre: the close integration of fire and movement to execute a plan.

Firing over Cover: as Figure 4 shows, firing over cover (A) is far more visible than firing round it as in (B). The firer is also better protected. Similarly anyone standing on a skyline is far more exposed.

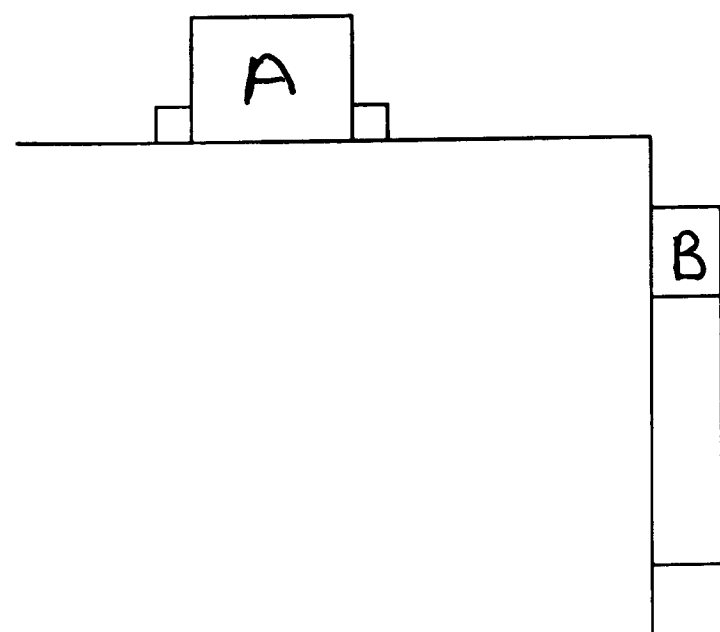


Figure 4 Firing round or over cover. In A the firer's head and shoulders are silhouetted over the top of cover. In B there is more protection and less visibility.

Fixed Ammunition: used of artillery, this consists of projectile and propellant fixed into a metallic cartridge case like a small arms round. Fixed ammunition, combined with QF weapons, resulted in faster firing. There was, however, a drawback the trajectory could not be adjusted by altering the power of the propellant charge. The only way to adjust the trajectory was via the piece's elevation. In consequence it was much more difficult to engage defiladed targets, a prime requirement of Indirect Fire, with fixed ammunition-firing pieces.

Flat-Trajectory Fire: on the whole the higher the muzzle velocity the flatter the trajectory and the greater the range. As can be seen from Figure 11 many targets are best engaged by flat trajectory fire and the flatter the fire the less important estimating the correct range is. But due to accidents of ground etc, flat trajectory fire is rarely useful over extended distances.¹⁷ Newtonian physics suggests that as muzzle velocities rise calibres and projectile weights tend to drop if recoil is to be minimised. This is true of small arms, but artillery which can minimise recoil, is not so constrained. For the tactical effects see Plunging Fire.

Forage: logistically forage is inconvenient compared to petrol. It is bulky, and bulk is often a more critical logistic dimension than weight. It decays, suffers from exposure to water, vermin eat it and it has a lower calorific value. Handling forage is often inconvenient. A realistic horse ration is some 12-22 lbs per day. It can be seen from Table 42 that far more forage was imported into South Africa than artillery ammunition. One of the great advantages of oxen in South Africa was that they could live by grazing and thus did not require forage to be carried for them. But they moved slowly in consequence.

Formation: the physical deployment of troops in a tactical formation on the ground. Secondly a brigade, division, corps or army formed of units and sub-units of more than one branch of the Army. Military theory emphasises that formations should not be unnecessarily disrupted. For French and German Infantry divisions in 1914, organised in two brigades, this meant that to generate a formation reserve, either a complete brigade had to be allocated, wasting combat power as 50% of the division was thus committed or a brigade had to be split. Reliance on an over-large formation means either that these have to be divided, straining C3, as occurred in South Africa with the Army Corps, or that routes are choked. This happened in Tirah due to the use of divisions. Similarly it is necessary to ensure that formations have the right proportion of arms within them. A weakness of the British Infantry division before 1899 was that it had only one artillery unit to support 2 brigades of Infantry. This meant that if both brigades were to be supported the gunner unit had to be broken down impairing its performance. Similarly howitzer brigade divisions were broken down in South Africa and Hamilton-Gordon's battery was split at times. This impaired effectiveness as there were insufficient signallers, while unit commanders and BCs were unable to provide the specialist advice to ensure howitzers' effectiveness.

Frontal and Flanking Attack: in general flanking are preferable to frontal attacks for the reasons advanced under Manoeuvre below. But the movement needed to reach a flanking position means delay. Furthermore there comes a point at which even most flanking attacks become frontal as the enemy retains his ability to switch troops on internal lines. There is also the very real need to break through an enemy line of defence to allow for subsequent outflanking and exploitation. The Army's greater stress on frontal assault after Manchuria may paradoxically have benefited manoeuvre as with greater emphasis on frontal attacks when an outflanking force encounters resistance an

¹⁷ DOAE *Engagement Ranges Western Europe* (West Byfleet nd) states that in Western Europe in only 5% of terrain is it possible to see over 4000 metres.

immediate frontal attack maintains momentum and tempo better than further outflanking.

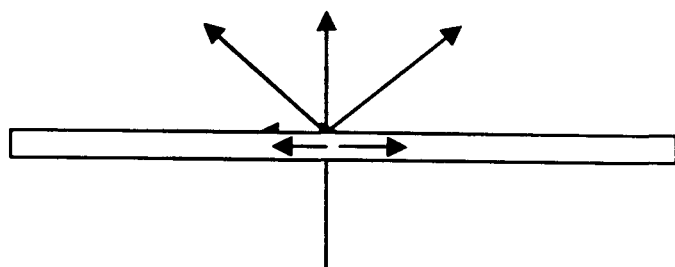


Figure 5. Breakthrough and Exploitation.

Frontier: for this thesis there is only one Frontier, the NW.

G: this describes the G or General Staff Branch, concerned with operations. Though the G Branch was superior and coordinated that activities of A and Q in practical terms: ‘G proposes, Q disposes.’ Ultimately operations depend on logistics.

Gun: a flat-trajectory, high-velocity artillery piece, optimised for shrapnel, long-range or Direct Fire. However, many use the term incorrectly as a generic description for all artillery weapons. When the generic term is required this thesis uses piece, rather than the anachronistic ‘barrel’ or the ugly ‘tube.’ As can be see in Figure 6 below, when the arrival of an HE round is at a relatively shallow angle (A), typical of guns, many splinters go harmlessly into the air or earth and this is on the assumption, invalid till the development of sensitive fuzing, that detonation is at impact.¹⁸ HE is more effective at (B), but such angles are more typical of mortar and howitzer trajectories.¹⁹

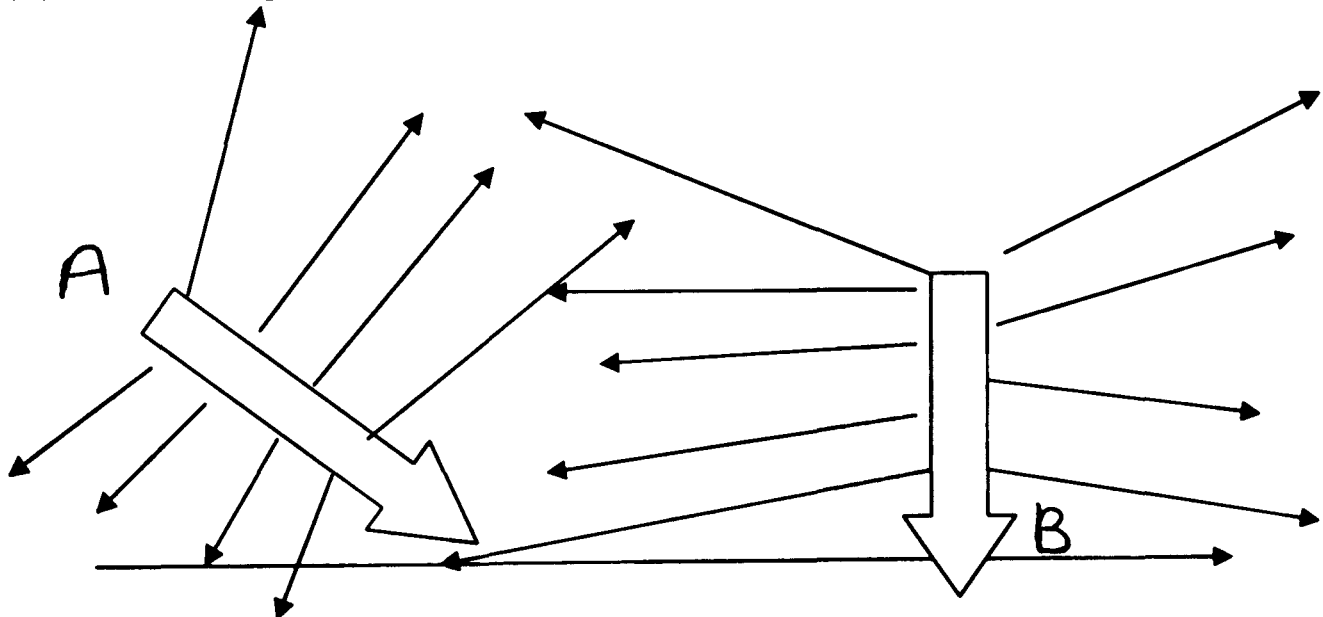


Figure 6 Gun angle of impact (A) and Howitzer (B); B is exaggerated but makes the point.²⁰ Fire in Case B is more likely to inflict casualties as the splinters are better distributed.

Heavy: this thesis uses heavy in relation to artillery pieces in the same way that contemporaries writing during the period of this thesis did. Heavy artillery in the period encompassed everything greater than field artillery. There is a shade of difference in

¹⁸ KJW Goad and DHJ Halsey *Ammunition* (Oxford 1982), pp 34-5.

¹⁹ Col Lee *Introduction to Battlefield Weapons Systems and Technology* (1985), pp 61-2 & Figure 5 suggests that the steeper the descent trajectory the better the fragment distribution.

²⁰ Goad and Halsey *Ammunition* pp 29, 36.

heavy fieldguns. Contemporaries saw these as implying guns firing shells of 25 lbs weight. There was debate after South Africa when some gunners argued that the 18 Pounder had sacrificed firepower for mobility.²¹

Holding Attack: an attack designed to hold the enemy in position or prevent him taking other action. Generally troops would not make a final assault and the aim was not to suffer undue casualties.

Howitzer: a lower velocity weapon with a more curved trajectory than a gun and thus more suited to Indirect Fire and searching into cover or dead ground. Typically its elevation is much greater and it is designed to engage targets behind cover, see Figure, 7 unlike guns. Howitzers are more suited to firing HE shells as the steeper angle of descent maximises the shells' efficiency.²² Howitzers used variable charges unlike many guns in the period, which used fixed ammunition, and therefore were better suited to Indirect Fire. But not all high-trajectory fire is Indirect.

Human Factors: initiative, morale and discipline and the like.

Independent Cavalry: a cavalry formation, in Britain usually of divisional strength, deployed on independent missions directly under the CinC. Normally this involved operational-level reconnaissance. They were termed Independent as they necessarily enjoyed a very wide degree of initiative.

Indirect Fire: the gunlayer cannot see his target and is directed by an FOO or uses predicted data. This latter was unusual in the period. The adoption of Indirect Fire by artillery in the period was one of the most significant tactical changes between 1899-1914. Initially it was slower and less effective at destroying point targets than Direct Fire. It has an excellent neutralising effect largely because it is distributed over an area due to inaccuracies. Due to its area coverage and artillery's relatively heavy ammunition, it is logistically demanding. As Figure 7 illustrates, it needs more elaborate C3 than Direct Fire. As with so many tactical issues the argument is not which is best but which is most effective in the given circumstances. Knocking out a single machinegun firing from an emplacement is probably best dealt with by a rifle grenade or tank firing Direct, neutralising an area by artillery firing Indirect. The former might take 5 rounds to secure a hit, the latter will take far more as the projectiles are subject to far greater atmospheric and other influences on their more curved trajectory, while longer range fire means that propellant and firing inconsistencies are magnified and thus the SSKP is far less.²³ As technology had developed the advantages of each type of fire have altered; today with projectile terminal guidance Indirect Fire is capable of destroying point targets. Pieces firing Indirect remain less vulnerable to CB and are less constrained by enemy action than those firing Direct. In the thesis' period Indirect-firing artillery was largely immune to CB. Target indication is much easier when firing Indirect as it is simply a range and bearing. Firing Direct targets have to be individually pointed out to all gunlayers. But it should not be automatically assumed that firing with a curved rather than a flat trajectory is automatically Indirect Fire. Some weapons, typically light mortars, may find high-trajectory fire more effective than flat, even though the target is in sight of the No 1.

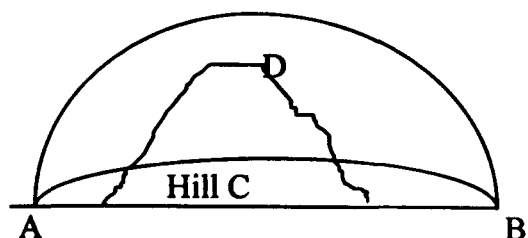
²¹ Brig Gen Wolfe-Murray 'Do we require Field Artillery?' *PRAI* XXIX (1902-3).

²² *The Royal Artillery Commemoration Book* (1950), p 40.

²³ JW Ryan *Guns, Rockets and Mortars* (Oxford 1982), pp 18-20.

Figure 7 Indirect Fire

A howitzer at A can engage a target, B, firing Indirect. due to its curved trajectory while a gun at A would be incapable unless C lower.



An FOO would be needed in the area of D to observe

Internal Discipline: based on factors internal to the soldier, eg morale, regimental feeling, patriotism, cohesion with comrades and so on. It contrasts with External, ie discipline imposed by the chain of command.²⁴

Jawan: the IA designation for an Indian soldier. Used generically it includes Ghurkhas.

Kop or Kopje: South African for a hill, often isolated and rising steeply from the veldt. This meant that defenders found it difficult to engage troops at the base. Kopje is the diminutive.

Krantz: South African for a cliff.

Laager: a camp or bivouac. The term has entered British Army terminology from the 1st South African War.

Leapfrog: a static unit covers the movement of another which advances beyond it. The concept also involves a change in artillery tactics which saw batteries moving alternately. This enabled fire to be kept up continuously. Previously the RA had emphasised that batteries should move together to present massed targets against enemy Direct Fire CB.

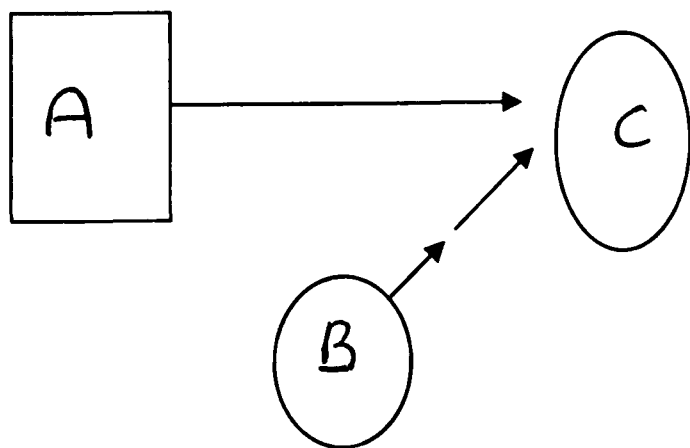


Figure 8. Leapfrogging. Unit A moves to C covered by fire from B.

LI: used as a generic term for Light Infantry or Rifle units and specifically for units such as the KOYLI.

Light Company: these were companies in non-LI infantry units trained as skirmishers. The other specialist company were grenadiers. This organisation was at its height in the Napoleonic era. By 1897 Light Companies no longer existed in the British or Indian Armies.

Linearity: this is used in Chapter 5 in two senses. Firstly it is used to express the mathematical idea that firepower is capable of achieving effects proportionate to inputs. Secondly the idea that attritional, firepower intense battles tend to be geographically linear in nature.²⁵ There is a connection between the two senses of linearity as can be deduced from Figures 9 and 9a below. In 9 a fire engagement will result in prolonged

²⁴ M Janowitz *The Professional Soldier* (Glencoe 1964), Chapter 3.

²⁵ M van Creveld, KS Brower & S Canby *Air Power and Manuever Warfare* (Honolulu 2002), p 9

attrition until the result is ground out. In 9a manoeuvre allows fire to enfilade the enemy and to concentrate strength against weakness. Here the value of the manoeuvre force's fire is considerably increased. However, it is much harder to quantify the psychological effects on enemy commanders and soldiers. Manoeuvre may overwhelm weak commanders psychologically, or dynamically overload inefficient C³ systems. This is clearly far less easy to represent mathematically.

Magazine: usually a boxlike structure typically mounted underneath the Lee-Metford and Enfield rifles, capable of holding a number of rounds, typically 10. The magazine meant that rounds did not have to be individually loaded in crises. This substantially increased firepower. Later in the Lee-Enfield, the magazine could be loaded with a clip holding a number of rounds further increasing the rate of fire. The Boer Mauser was a cliploading magazine rifle and could be reloaded faster than the Lee-Metford.

Manoeuvre: the purposeful exploitation of mobility to implement a commander's plan for defeating the enemy. Manoeuvre allows concentration against weakness. At the tactical level it may make fire much more effective. Flanking or reverse fire from positions gained by manoeuvre has considerable surprise value. Manoeuvre tends to stress time more than positional warfare and because in the period before widespread RT, signal communications were imperfect, it put a premium on subordinate initiative to speed tempo. Inevitably manoeuvre stresses ground-based reconnaissance more than positional warfare.²⁶ In the latter, the period 1915-18 forms an example, there is such a density of troops, that apart from patrolling in no man's land there is little opportunity for ground-based reconnaissance. Manoeuvre generally is over considerable distances. Examples are Marlborough's advance to the Danube in 1704, SICHELSCNITT, COMPASS, the Allied breakout from Normandy or the Soviet attack on Manchuria in 1945. This has implications for logistics as a manoeuvre which runs out of gas in mid-stream is doomed. Here examples run from the Ardennes in 1944 to the Japanese attack on Imphal. Patton summed up the problem well: 'my troops can eat their belts but my tanks have got to have gas.' Slim's attack on Deir es Zor is instructive. Manoeuvre poses tougher challenges for logistics than attrition despite the latter's scale.²⁷ In attrition there is greater ability to tailor combat to logistic reality. In operational level manoeuvre in the period of this thesis the most significant subordinate command level was probably the divisional. Divisions were at about the level where responsiveness and the ability to coordinate were balanced. Corps-based resources were too far back and the distance from the point of contact meant delay. But in firepower-heavy attrition the need to coordinate a heavy weight of fire focused on the corps level; this was the experience of firepower intense attrition between 1915-18.

²⁶ Col Henderson *Art of Reconnaissance* (1907), p 1. Henderson tied his emphasis to manoeuvre battles. The argument can however be proved from basic principles: two forces locked in attritional combat do not have the space available for ground reconnaissance.

²⁷ FM Slim *Unofficial History* (1959), pp 155-163. Slim's account of the interplay of time, manoeuvre and logistics suggests the problems which logistics pose to manoeuvre; Col Shaw *Supply in Modern Warfare* (1938), pp 54-5; DMO (1996), p C-10.

Figure 9. Frontal Fire. Fire from A-B to C-D and the reverse is likely to result in gradual attrition over a long period as neither side has a significant advantage and fire is frontal.

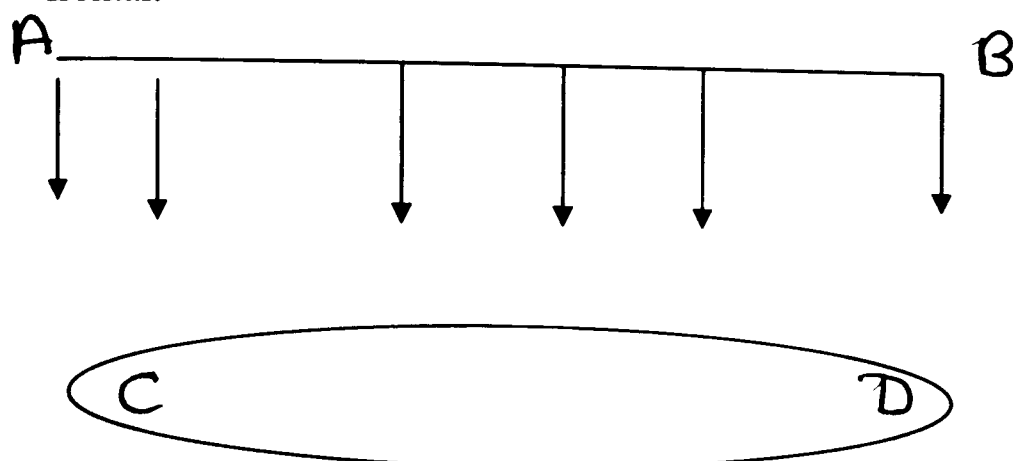
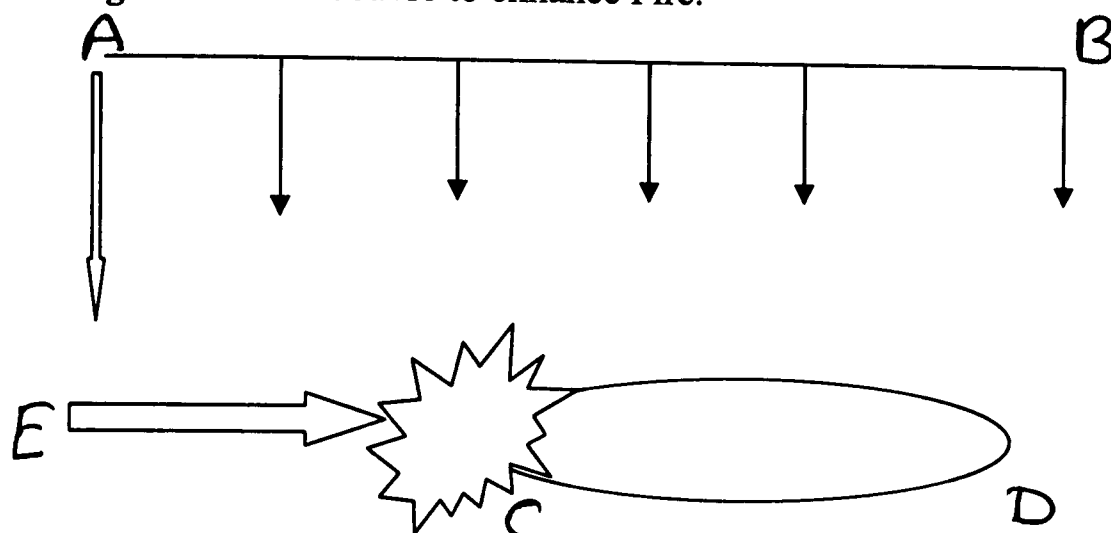


Figure 9a. Manoeuvre to enhance Fire.



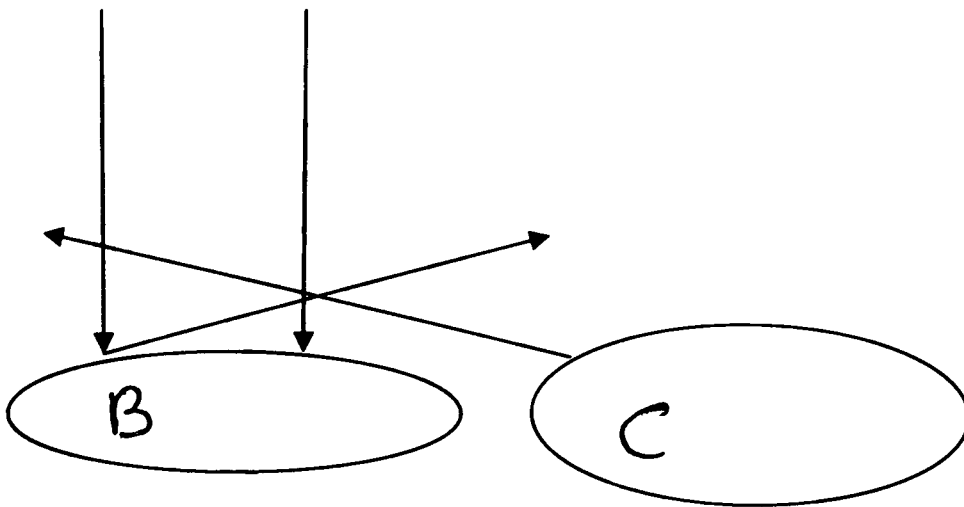
Manoeuvre to E enfilades C-D and makes fire far more effective. There is also the effect of surprise and that troops assaulting from A-B or E can be given covering fire for longer.

March Discipline: a system of common low-level procedures eg fixed halt times, closed-up columns and standard gaps between bodies which maximise mobility.

MI: Infantry mounted or carried to increase their mobility. Pre-1899 MI undertook no mounted combat. MI could also be carried in carts and on MT and borne by camels. British commentators pre-1899 were adamant that MI were distinctive to the British Empire. Professor Holmes has justly pointed out that Cossacks and French colonial forces contained equivalents; the British saw Cossacks as cavalry, while they felt that British MI were unique as they would be used in major warfare and were regular Infantrymen. Whether contemporary British commentators were correct or not is immaterial, but they certainly thought they were. British instructions emphasised that MI soldiers were to be high quality, and MI theorists eg Hutton saw them as a corps d'elite.

Mutual Support: used of defensive positions sited so that no position can be attacked without the assailants being fired at from another position. In attack covering fire between sub units or units may represent mutual support.

Figure 10. An enemy advancing on Position A from B is enfiladed by fire from Position C. In attack troops advancing on B from A can be covered by fire from C. Similarly troops advancing from C to D can be supported from A. Using intermediate positions the troops advancing from A and C can offer each other mutual support.



Nek: South African for a pass or low ground between hills.

Neutralisation: the use of fire either to prevent enemy activity, or describing the endstate so achieved. Neutralisation is likely to be for a specified period eg to cover other troops moving and is less logistically demanding than destruction. Typically to neutralise an enemy platoon position for 5 minutes might require a battery firing at rate 3 to cover an infantry assault. The total weight of ammunition is as follows:

6 guns firing 3 rounds per minute for 5 minutes= $6 \times 3 \times 5 = 90$ rounds or 90×25 lbs or about a ton (it should be noted that an allowance must be made for packaging and cartridge cases). To destroy the same target a medium battery, using Soviet norms would have to fire 670 rounds of much heavier ammunition or 670×120 lbs= some 32 tons.²⁸ The time taken would be considerably longer. Due to the fact that heavier rounds are used and that these take far more effort to shift on the gun position; the rate will probably be 2 rpg per minute at best. This assumes that such weapons had recoil mechanisms. Destruction will therefore take: $600 / (6 \times 2) = 50$ minutes. But a straight arithmetical calculation that equivalent destruction to medium artillery fire can be made by firing the same weight of ammunition from fieldguns is incorrect. Such ammunition contains less explosive than medium artillery's shells, and though fired at a higher muzzle velocity, this flatter trajectory fire is less effective at delivering HE.

Normal Formation: a standard template formation of troops in which ground and threat are less emphasised than regularity and control by superiors.

Operational: capable troops or serviceable equipment. Alternatively warlike activity or describing the intermediate level of war between tactics and strategy. The latter was not a term recognised by contemporaries, but, like M Jourdan's prose, existed.

Order of March: the location of combat and administrative units in a logical sequence speeds reactions and enhances administrative efficiency. It is sensible to start cavalry off first as their pace is not checked by following slower-moving infantry. Tactically it usually makes sense to station most artillery well up in the order of movement as their long-range fire early in an engagement covers the remainder's deployment and pins the enemy in position. Sappers well forward are able to undertake tasks in time to ease the movement of the main body. Logistical transport moves logically behind fighting troops as with primitive routes wheeled vehicles are more likely to cause delays. When combat is anticipated ammunition and ambulances should lead the transport columns, when it is not, ration wagons are needed first so that troops can be fed as soon as possible after marching.

²⁸ C Bellamy *Red God of War* (1986), p 182.

Organisation: the organisation of units and formations has considerable effect on their potential for combat and mobility. Over-many subordinate HQs complicate command.²⁹ As troops usually move in column, overlarge formations may cause delay as their extended columns take more time to pass a point. Another important aspect of organisation is the appropriate grouping of arms and services. For example organising a formation without bridging equipment would severely impede mobility, particularly in Western Europe.³⁰ Artillery has great firepower but its columns are long and its ammunition usage is insatiable. Overmuch artillery therefore impedes manoeuvre. Mobility also depends on sappers. A land-based formation without or with few sappers would have deeply impaired mobility. The influence of traffic is another factor affecting mobility. As a key dimension is the ratio between routes and vehicle numbers, this suggests that larger forces are more likely to have their mobility impaired. A significant organisational flaw before 1899 was that the Infantry Division only had one artillery unit to support two brigades. This meant that there were too few guns for effective support, but it also meant that the unit had to be divided if both brigades were to be supported. Brigade divisions were not designed to be divided; they were the accepted tactical unit. Furthermore their division meant that they were comparative strangers to the units they were supporting.³¹

Overhead Fire: fire which is directly above friendly troops. By its very nature such fire is likely to be high trajectory, due to safety requirements, and is possibly Indirect. Contemporary field guns were poor at providing such fire due to their flat-trajectories. The use of overhead fire before 1897 was very unusual.

Outflanking and Extension: a widely extended line has geometrically greater capability to outflank.

Enemy Position

Enemy Position

..... (5 paces extension) (10 paces).

Against this must be balanced the fact that the further extended the line the greater the difficulty of command and manoeuvre and the less depth for the same number of men.

Picket: a group deployed for the protection of a camp on the Frontier or convoy. During Tirah the system changed with pickets pushed further out to counter modern rifles' longer ranges.

Pointing: a sword designed to kill with the point rather than a cutting weapon or hybrid. The pointing British cavalry sword, introduced after South Africa was seen as an excellent weapon.

Pom Pom: a transitional weapon produced by Vickers of 37 mm calibre. It was basically an up-scaled machinegun, firing a small explosive shell. Originally fielded by the Boers, the British deployed them to counter the Boer weapons. The pom pom was QF. It proved useful in South Africa's open terrain, but it had neither the range nor the firepower of gun, yet needed almost as many crewmen and was not much more mobile.

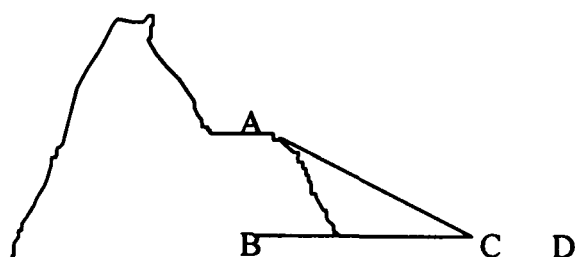
²⁹ As suggested by the Army's brief experimental use of task forces in the 1970s and Buller's failure to form his mounted troops in a division in 1899. The former eliminated the brigade level of command was found to be unworkable as the span of command was too wide.

³⁰ *1 (BR) Corps Terrain Study* (nd) suggests that there is on average an obstacle that needs bridging ever 10 kilometres travelled in NW Europe with larger ones 50 kilometres apart. Even in the desert bridging is needed as the 8th Army found at Mareth, Brig ISO Playfair and Brig CJ Molony *The Mediterranean and Middle East IV* (1966), pp 339-40.

³¹ Brig Bidwell *Gunners at War* (1970), p 167 for the organisational and psychological benefits of stable formations. Hilyard makes a similar point, cited in Chapter 3.

It was disliked by senior gunners and was later passed to the Cavalry, where it was found to complicate training. Pom poms were eventually used as AA weapons in 1914. **Plunging Fire:** though positions on hilltops may be tactically advantageous, flat trajectory fire from them is wasted against targets on level ground. Consequently hills are often poor positions for small arms whose flat-trajectory fire is far more effective when delivered over level ground. Initial assaults on Boer positions sited on top of kopjes were consequently protected while the defenders furnished a good target for artillery.³²

Figure 11. To Show Plunging Fire



Fire from B is dangerous all along the line BC and beyond to D. From A only C is at risk.

QF: the French 75mm was the first true QF fieldgun. A recoil system meant that the carriage was motionless only the barrel recoiling. The guncrew was spared the task of repositioning the weapon and relaying was much simplified. The crew was not forced to move away from the piece when it was fired. This meant that the rate of fire could be more rapid. As only the barrel instead of the whole piece recoiled, this meant that some of the guncrew could use the shield's protection. QFs fired fixed ammunition in the period raising the rate of fire, though this limited trajectories and the resulting ability to search into cover.³³ The Army's next fieldgun, the 25 Pounder, had a variable charge system.

Regimental Transport System: this was based on each unit being supplied with its own dedicated unit transport to move combat supplies.³⁴ The problem which Roberts felt was an argument not to adopt it in South Africa was that units on static tasks still in theory kept their transport. This meant that the transport bill was bigger than with a more centralised system.

Reverse Slope: in Figure 11 troops at E are on the reverse slope to enemy at D and are shielded from Direct and observed Indirect Fire. Enemy artillery may be unable to shell E due to problems of crest clearance. Their fire will also be undirected and is thus unlikely to inflict serious casualties.

Royal Artillery: the Royal Regiment of Artillery poses terminological problems. Though a regiment, it was not an arm that was regimentally based, ie one in which soldiers served in one or two linked units for their entire career. Gunners, particularly officers were transferred between units and sometimes between branches; an officer might start in a field battery and then serve in a fortress and then transfer to mountain artillery. By virtue of the RA's size, the fact that officers were enlisted from the more educated entrants and because of the RA's central institutions the average gunner was more exposed to Army-wide forces and encouraged to develop a more professional and general outlook. The RA, particularly in its field and mounted branches delegated more

³² WS Churchill *From London to Ladysmith* (1900), pp 317-8. See Chapter 3 for the early battles when hilltop Boer positions favoured British attacks by providing approaches in dead ground.

³³ QF development and technology is summarised by JW Ryan *Guns, Rockets and Mortars* (Oxford 1982), pp 4-6. Its Figure 5 on p 18 illustrates the effects of different charges on trajectories.

³⁴ Col Richardson *With the [ASC] in South Africa* (1903), pp 83-4, 105-6 suggests the Regimental System's problems there. Richardson was a senior ASC officer who had served in South Africa.

freely to juniors. In the period the RA's field branches were very centred on batteries.³⁵ The RHA was the most prestigious of the 3 RA branches, and it is perhaps more than coincidental that many senior First World War gunners were RHA, despite the fact that the war was very much a heavy artillery war.

Sangar: a raised defensive structure usually of rough stones and adopted by the British from the Frontier tribes. The term has entered into British Army terminology for a raised defensive structure.

Shelter Trench: a shallow protective scrape. It can be seen that, due to its length and shallowness, it was very vulnerable to shrapnel fire.³⁶ The spoil heap at the front was prominent.

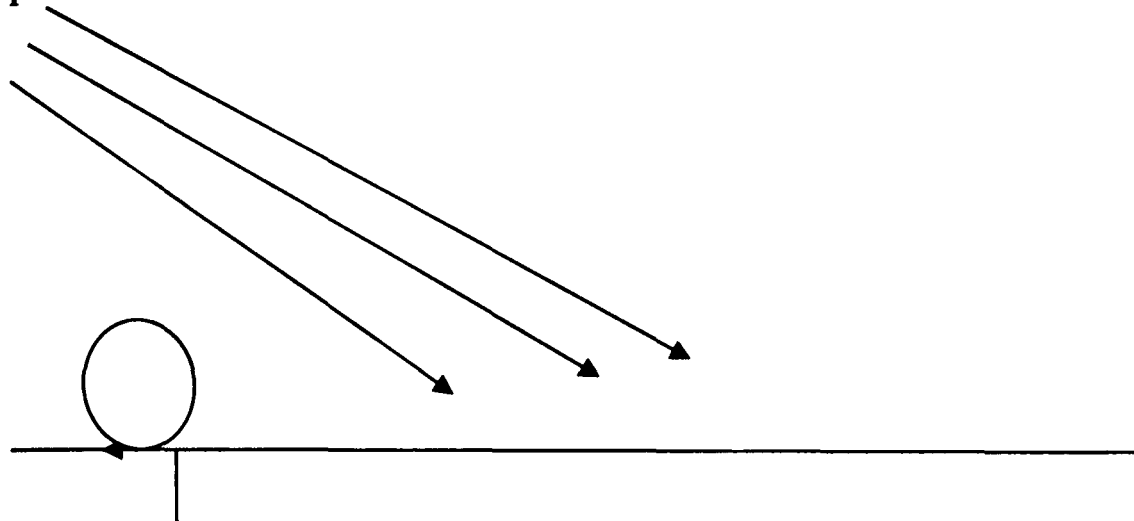


Figure 12. A Shelter Trench. Shrapnel searches into long shallow defences easily.

Shikar: stalking for usually big game, a shikari is either the hunter or his professional guide. Big game shooting was a popular officer recreation and officers saw it as giving excellent training in fieldcraft and marksmanship.

Shrapnel: an AP munition, which projected shrapnel balls forward using the parent projectile's residual velocity and a small burster charge designed to open the shell but not propel the shrapnel balls.³⁷ High velocities and flat trajectories increased shrapnel's efficiency at targets in the open and on flat ground. It is thus best suited for flat-trajectory fire. As it is an airburst munition with wide area coverage, shrapnel is more effective than groundburst HE, see Figure 6, at exposed targets in the open and for neutralising men in cover. Shrapnel was usually detonated by a time fuze but could be set to initiate on impact and had a limited effect on structures. Considerable skill was required to burst shrapnel at the optimum height. In contrast HE fragmentation and fuzing were very inefficient till well into the First World War. Even modern groundburst HE sends 50% of its splinters into the ground or skywards.³⁸

³⁵ Bidwell *Gunners*, Chapter 3.

³⁶ IDB 1896 Plate XVI.

³⁷ Goad and Halsey *Ammunition* p 137 shows a diagram of a shrapnel shell.

³⁸ Brig Bidwell *Gunners at War* (1970), p 24.

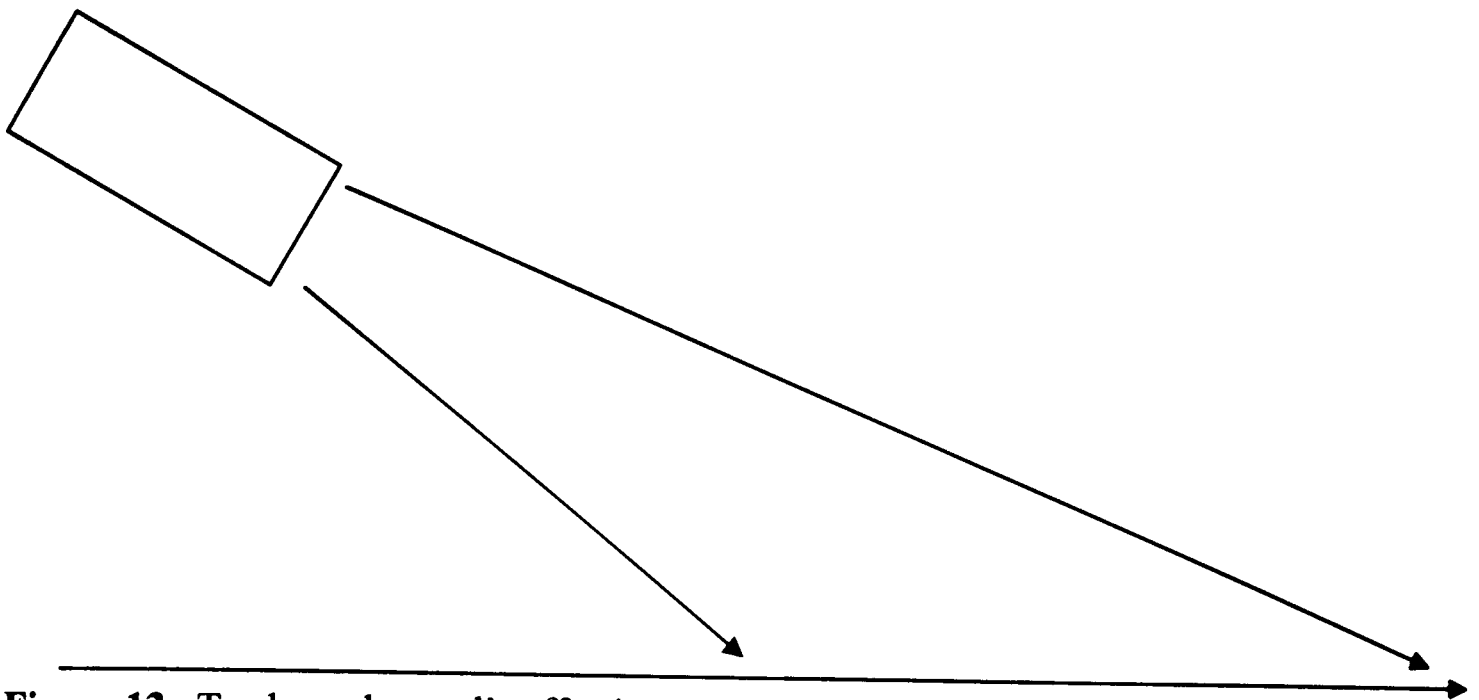


Figure 13. To show shrapnel's effectiveness on open ground. A narrow, deep trench will give a high degree of cover against frontal shrapnel fire if the defenders are not forced to expose themselves, eg by infantry assaulting. Shrapnel will however neutralise entrenched defenders even though it does not inflict casualties by pinning them down.

Skirmishing: low-level fire and manoeuvre requiring individual initiative, independent fire and fieldcraft. Plowden's definition in Chapter 2 encompasses its elements.

Small-bore: the thesis uses this term as it was used in about 1900 to differentiate between the generation of rifles comprising the .450 MH and the .577 Snider and the current .303 and .276 generation of weapons.

Smokeless Ammunition; the new propellant such as Cordite were not entirely smokeless, but, as can be contrasted between Plates I and II of Noble's work, it is much less visible than black powder.³⁹ They were more energetic and this meant that trajectories were flatter, thus increasing Direct Fire hit-probabilities. They left less fouling in the barrel and less smoke on firing. Typically they produced 70% gas and 30% solid residue, gunpowder produces 35% and 65% respectively.⁴⁰ Both enabled rates of fire to increase. The more energetic propellants and higher velocities meant that ammunition could be lighter so more could be carried.

Span of Command: correct organisations make command and staffwork easier. A commander will find it easier to deal with 4 rather than 8 subordinates, a point made for double companies. Secondly it is easier for a superior HQ to deal with a division rather than individual brigades. Forming brigades into divisions also means that the resulting formation is better able to tackle higher-level tasks than individual brigades as there is a senior commander immediately at hand to coordinate action.⁴¹ For example had GHQ tried to command cavalry brigades directly, as *WEs 1898* implied, this would probably have meant the freedom of the brigades would have been limited as GHQ tried to maintain control with primitive communications.

Squadron System: the British instituted the Squadron System in the 1890s. Previously there was no squadron-level in cavalry. It should in theory have promoted decentralisation and initiative by increasing the power of squadron leaders at the expense of COs. In practice many regiments implemented the system poorly.

Staff Duties: the standardised vocabulary, formats, abbreviations etc which enable staffwork to be clear and concise.

³⁹ A Noble *Artillery and Explosives* (1906), pp 523-4.

⁴⁰ WW Greener *The Gun* (1910), p 560.

⁴¹ Here the lack of coordination between western German armies in 1914 suggests the point. Moltke was acting as the western theatre commander and effectively as supreme commander.

Staffwork: the procedures and products which enable the staff to coordinate and synchronise military activity. Examples include operational orders or movement graphics developed in the period.

Stellenbosch: the South African equivalent of limoger. Like Limoges it was a town remote from combat where the incompetent or simply unlucky could do little damage.

Swingletree: a term used of hippophile RA, usually RHA officers who had no interest aft of the swingletree, the point at which the piece is attached to the limber. Swingletree gunners' tactical ethos was based on simple dashing tactics. Indirect Fire which was slow and scientific was anathema to them. Bidwell cites a distinguished gunner who advised his son that, with the advent of elementary mathematics, the RA was no longer the profession for a gentleman.⁴²

Tactics: the conduct of combat; Clausewitz's comments on potential combats should be noted.

Tempo: a relative time advantage over the enemy, produced by a combination of C3, movement and so on.⁴³

Traversing: By zigzagging trenches, enfilade is prevented in A. In B all troops are vulnerable to fire searching down the trench. Though traversing had long been employed in siege warfare, it was not a usual feature of Infantry trenches until South Africa.

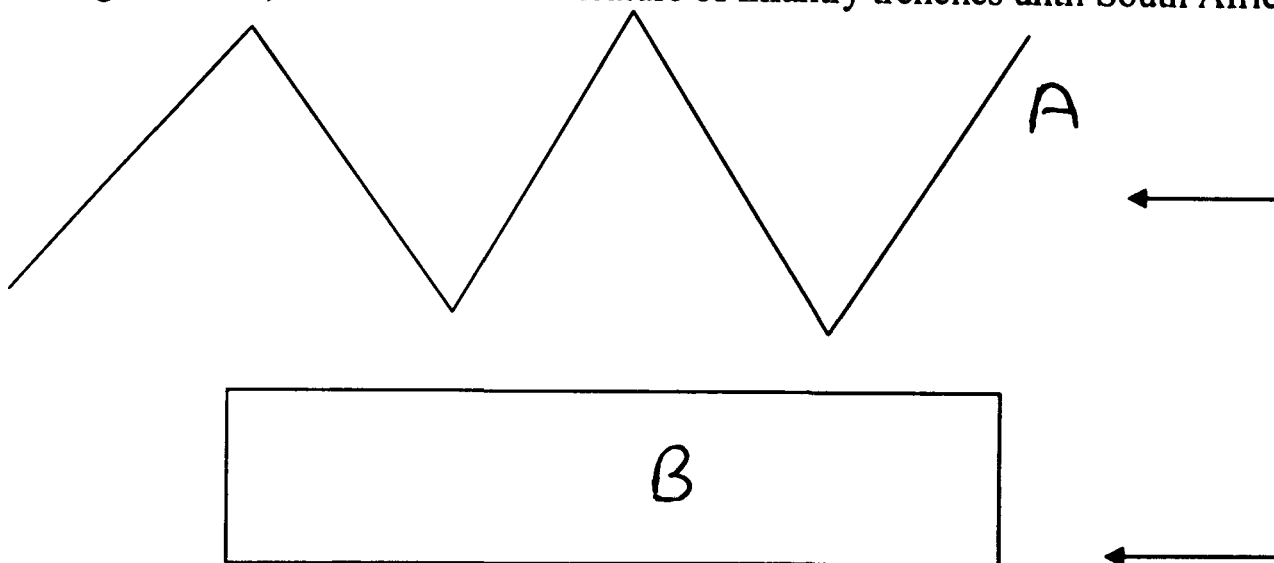


Figure 14. Traversing.

Two-Sided Exercises: these have an enemy force with a wide degree of freedom and are therefore better at promoting initiative than when the enemy is rigidly controlled. But such exercises may not bring out those lessons that commanders want to instil.

Unit: A regiment of cavalry, battalion of Infantry or brigade division of artillery usually commanded by a lieutenant colonel. Batteries, companies and squadrons were sub units.

Veld or Veldt: the high rolling plateau covering large parts of South Africa.

Intervisibility is much greater than in Western Europe. Many regiments adopted the veldtschoen as their officers' formal shoe after South Africa.

Wall Battering: the target area diminishes as the projectile's angle of impact approaches the vertical (E), while more horizontal fire (B) tolerates greater margins of error in ranging. Furthermore the correct target is the base of the wall as gravity assists the undercutting effect of the shells. Even shells landing short of the wall at (F) may ricochet and detonate effectively thus increasing the margin of error in ranging.

⁴² Bidwell *Gunners* p 16.

⁴³ DMO (1996), pp 4-24-5.

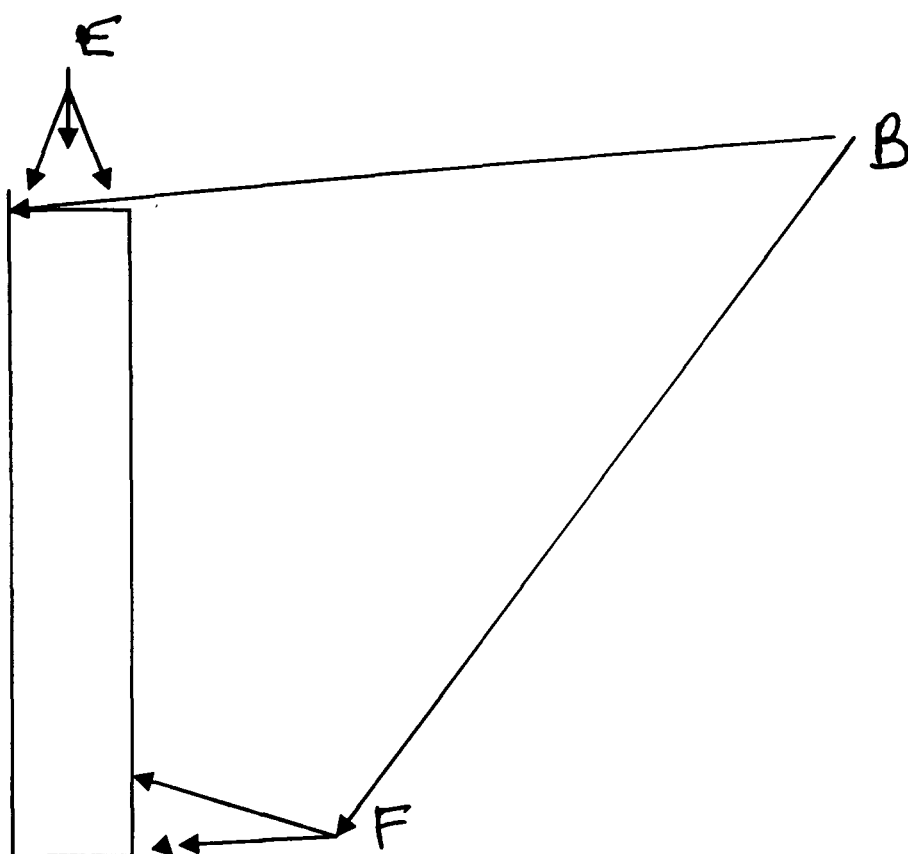


Figure 15. Battering a wall.

Wing System: Indian infantry units were formally organised into half battalion wings. This naturally reduced the span of command to either the CO controlling 2 wings or the CO and 2ic each controlling one each. Control was eased at the expense of combat power. Rejection of wings effectively delegated initiative from 2 wing to 4 double company commanders. This improved the career structure. Though wings were not formally instituted in the British Army there are frequent references to half-battalion deployments or even to wings themselves.

Glossary of Operation Titles

Operation COMPASS. Wavell and O'Connor's offensive against the Italians in 1940-1. Made with few resources against a numerically far superior enemy it led to the Italians' crushing defeat.

Operation DESERT STORM. The Coalition's liberation of Kuwait in 1991.

Operation GERICHT. The German attack on Verdun in 1916, probably intended to inflict attrition on the French Army.

Operation SICHELSCHNITT. The German attack on France, Belgium and Holland in 1940. Dr Todman points out that SICHELSCHNITT was not an official designation.

This author feels that the title was used reasonably contemporaneously to describe the German operational plan and has retained it in this thesis for convenience. The question of whether the title should be capitalised has been referred to the SD team at the JSSC.

Abbreviations

<i>12 RLJ 12th Royal Lancers Journal</i>	<i>CDB Cavalry Drillbook</i>
<i>95 I'm Ninety Five</i>	CE Chief Engineer
<i>AA Army Annual</i>	CGS Chief of the GS
AAG Assistant AG	<i>CHM Cornhill Magazine</i>
AC Army Code	CI Chief Instructor
ADM Admiralty (NA reference)	CID Committee of Imperial Defence
<i>ADP Army Doctrine Publication</i>	CIGS Chief of the Imperial GS
<i>AFM Army Field Manual</i>	CISOCs 'Considerations Influencing the Selection of Officers for Command and the Staff' (EPs)
AFPs Arnold Foster Papers (BL)	CIV City Imperial Volunteer/s
AG Adjutant General	<i>CJ Cavalry Journal</i>
AHQ Army HQ (usually used of India)	CM Court-martial
AIR (NA reference)	CO Commanding Officer
<i>AL Army List</i>	COLPs Coles Papers (IOL)
AMS Aldershot Military Society	COS Chief of Staff
<i>ANG Army & Navy Gazette</i>	COSCM Chief of Staff Circular Memorandum
<i>AO Army Order</i>	CPs Capper Papers (LHCMA)
AOD Army Ordnance Department	CRA Commander RA
AP Anti-Personnel	CRE Commander RE
APs Allenby Papers (LHCMA)	<i>CR The Contemporary Review</i>
<i>AQ Army Quarterly</i>	CRMPs Crum Papers (NLS)
<i>AR Army Review</i>	<i>CT Cavalry Training</i>
ARDPs Ardagh Papers (NA)	CT Cape Town
ARS Army Records Society	<i>CTrg Combined Training</i>
<i>ARSG Annual Report of the School of Gunnery</i>	CUP Cambridge University Press
ASC Army Service Corps	D Deputy
<i>ASCJ/Q ASC Journal /Quarterly</i>	<i>DALISCMBs Diaries and Lectures of the Officers of the Indian Staff College Visiting the Manchurian Battlefields in 1907</i>
ATA Army Temperance Association	<i>DFANAMW Deductions from accounts of night attacks during the Manchurian War</i>
AVD Army Veterinary Department	DGDT Director(ate) General Doctrine and Training
<i>BA Broad Arrow</i>	DLPs De Lisle Papers
BalPs Balfour Papers (BL)	DME Directorate of Military Education
BaPs Barton Papers (NAM)	DMO Director/ate Military Operations
<i>BAR The British Army Review</i>	<i>DMO Design for Military Operations</i>
BC Battery Commander	D(M)MI Director/ate (Mobilisation and) Military Intelligence
<i>BDD British Defence Doctrine</i>	DMT Director/ate Military Training
BePs Beynon Papers (IOL)	DOAE Defence Operational Analysis Establishment
BEF British Expeditionary Force	DPs Denning Papers (NAM)
BGS Brigadier GS	DPS Director/ate of Personnel Services
<i>BHG Black Horse Gazette</i>	DS Directing Staff
<i>BIHR Bulletin of the Institute for Historical Research</i>	DSD Director/ate Staff Duties
BL British Library or Breech Loading	EDPs Edmonds Papers (LHCMA)
BM Brigade Major	<i>EDR Edinburgh Review</i>
BMGO Brigade Machinegun Officer	EPs Ellison Papers (NAM)
<i>BORs Reports of British Officers (RJ War)</i>	<i>ER Empire Review</i>
BPs Birdwood Papers (NAM)	ESHPs Esher Papers (Churchill College)
BPPs Baden Powell Papers (NAM)	ESTS East of Scotland Tactical Society
<i>BROHRJW British Official History of the Russo-Japanese War</i>	<i>FAT Field Artillery Training</i>
<i>BROHSA British Official History South Africa</i>	FePs Ferrier Papers (IOL)
BRPs Brooke Papers (LHCMA)	FM Field Marshal
BSPs Burnett-Stuart Papers. (LHCMA)	FO Foreign Office (NA reference)
BULPs Buller Papers (NA/DRO)	FOM Figure of Merit
<i>BWM Blackwood's Edinburgh Magazine</i>	FOO Forward Observation Officer
C ³ I Command, Control, Communications and Intelligence (and permutations)	fps feet per second
CA Cape Archive	<i>FSPB Field Service Pocket Book</i>
CAB Cabinet (NA reference)	
CB Counter Battery/Bombardment	
Cd Command (published by Command)	

FSM Field Service Manual
FSRs Field Service Regulations
FR Fortnightly Review
GAR General Annual Report
GEOHSA German Official History SA
GHG Green Howards Gazette
GOC General Officer Commanding
GO General Order
GOI Government of India
G&P Gale and Polden
GR Gurkha Rifles
GS General Staff
GSW Gunshot Wound
*GSO GS Officer*¹
HamPs Hamilton Papers (LHCMA)
HBM Household Brigade Magazine
HCM Household Cavalry Museum
HDP Haldane Papers (NLS)
HDTs Home District Tactical Society
HEWPs Wilson Papers (LHCMA)
HE High Explosive
HedPs Headlam Papers (RAI)
HGPs Hamilton-Gordon Papers (RAI)
HLIC Highland LI Chronicle
HMSO Her/ His) Majesty's Stationary Office
HOWPs Howell Papers (LHCMA)
HPs Haig Papers (NLS)
HRJ Hampshire Regimental Journal
HuPs Hutton Papers (BL)
HWPs Hunter Weston Papers (NAM)
IA Indian Army
IAR Indian Artillery Report
IGC Inspector General of Cavalry
IDB Infantry Drill Book
IG Inspector General
IGF IG of the Forces
IGHF IG Home Forces
IGOF IG Overseas Forces
IHR Institute of Historical Research
IME Instructions in Military Engineering
IPs Isacke Papers (LHCMA)
IOL India Office Library
IOR India Office Records
IT Infantry Training
IWM Imperial War Museum
JCH Journal of Contemporary History
JHR Journal of the Hampshire Regiment
JLR Journal of the Leinster Regiment
JMH Journal of Military History
JModH Journal of Modern History
JPs Jourdain Papers (NAM)
JRAI Journal of the RAI
JRUSI Journal of the RUSI
JUSII Journal of the United Services Institute of India
JUSCA Journal of the US Cavalry Association
KCL King's College London
KRs King's Regulations

KRRCC King's Royal Rifle Corps Chronicle
LAD Light Aid Detachment
LHCMA Liddell Hart Centre for Military Archives
LMIL IOR File Reference
LVA Late Victorian Army
MA Military Attaché
MA Military Affairs
Map 1 etc (see Index p)
MAT Memorandum on Army Training
ME Military Engineering
MePs Methuen Papers (Wiltshire Record Office)
MFF Malakand Field Force
MGO Master General of the Ordnance
MI Mounted Infantry
MIT Mounted Infantry Training
MM Macmillan's Magazine
MME Manual of Military Engineering
MOFB Military Operations France and Belgium
MPs Maconchy Papers (NAM)
MMPs Montgomery-Massingberd Papers LHCMA
MR Monthly Review
MR Mounted Rifles
MRs Musketry Regulations
MSI Military Society of Ireland
*MT Military Training*²/ Motor or Mechanical Transport
MTS Manchester Tactical Society
MUP Manchester University Press
MURPs Murray Papers (IWM)
MVC Motor Volunteer Corps
MW Mountain Warfare
MXP Maxse Papers (IWM)
NA National Archives
NAA Navy and Army
NAM National Army Museum
NavRev Naval Review
NCO Non Commissioned Officer
nd not dated
ND National Defence
NHL Naval Historical Library
NLS National Library of Scotland
np no publisher
NWF North West Frontier
NR National Review
NY New York
OB Ordnance Board
OCFW Oxford Conference on the Future of War
OPs Ormsby Papers (IOL)
ORC Orange River Colony
OUP Oxford University Press
OXLIC Oxfordshire LI Chronicle
PC Prince Consort's (Library)
PFF Punjab Field Force
PI Punjab Infantry
PP Parsons Papers (RAI)
PPCREs Professional Papers of the Corps of REs
PRAI Proceedings of the RAI

¹ Graded usually 1-3 for capt to lt cols.

² WO Branch

PRO Public Records Office (NA reference)
 psc passed staff college
 PT Physical Training
 Q Question,³ also QMG's staff branch concerned with logistics
 QF Quick Firer/ing
 QMAWC Queen Mary and Westfield College
 QMG Quartermaster General
 QOG *Queen's Own Gazette*
 QR *The Quarterly Review*
 qs qualified staff
 RA Royal Artillery
 RAC Royal Armoured Corps
 RAI RA Institute
 RAL RA Library
 RAMC Royal Army Medical Corps
 RASC Royal Army Service Corps
 RAVC Royal Army Veterinary Corps
 RBC *Rifle Brigade Chronicle*
 RCTTEF *Report on the Commissariat Transport Arrangements of the Tirah Expeditionary Force*
 RCWSA Royal Commission on the War in South Africa
 RE Royal Engineer(s)
 REJ *Royal Engineers Journal*
 REI RE Institute
 REL RE Library
 REOTEF *Report on The Engineer Operations of the Tirah Expeditionary Force*
 RFA Royal Field Artillery
 RFC Royal Flying Corps
 RGA Royal Garrison Artillery
 RHA Royal Horse Artillery
 RHS Royal Historical Society
 RLKAI *Record of Lord Kitchener's Administration of the Army in India 1902-1909*
 RM Royal Marines
 RMA Royal Military Academy (Woolwich), or Revolution in Military Affairs
 RMC Royal Military College (Sandhurst)
 RML Rifled Muzzle Loading
 RMMISAs *Reports and Memoranda on Military and Inter Service Affairs* (BalPs)
 ROBPs Robertson Papers (LHCMA)
 RPs Roberts Papers (NAM)
 RPrs *Remount Proceedings*
 RRCCTWSA *Report of the Royal Commission ... upon the Care and Treatment of the Sick and Wounded during the South African Campaign*
 RSM Regimental Sergeant Major.
 RSO Railway Staff Officer
 RT Radio Telephony
 RUSI Royal United Services Institute
 RWORC *Report of the War Office (Reconstitution) Committee*
 S Section⁴

SA South Africa
 SAD *South African Despatches*
 SAFF SA Field Force
 SCSi Strategic and Combat Studies Institute
 SL *Scottish Life*
 SHPs Shea Papers (LHCMA)
 SIULRs *Special Instructions for the Utilization of the Local Resources of a country ... 1911*
 SKDs *Spion Kop Despatches*
 SLR Self Loading Rifle
 SM *Scribner's Magazine*
 SME School of Military Engineering
 SMLE Short Magazine Lee Enfield
 SNCO Senior NCO
 SO Standing Order or Staff Officer
 SP *Spectator*
 SR *Saturday Review*
 SRO Scottish Record Office
 SSKP Single Shot Kill Probability
 SSM Squadron Sergeant Major
 SUPP Supply (NA reference)
 SWPs Spencer Wilkinson Papers (LHCMA)
 TA *The Antelope*
 TE *The Eagle*
 TEF Tirah Expeditionary Force
 TEWT Tactical Exercise without Troops
 TF Territorial Force
 THWSA *Times History of the War in South Africa*
 TRADOC Training and Doctrine Command (US)
 TVA Transvaal Archive
 USG *United Service Gazette*
 USM *United Services Magazine*
 VDPs von Donop Papers (IWM)
 VS *Victorian Studies*
 WE War Establishment (also an official work *WEs*)
 WO War Office⁵
 WOL *WO List*
 WPs White Papers (IOL)
 WR Web Reference⁶
 WT Wireless Telegraphy
 WYNPs Wynne Papers (NAM)
 19C *The 19th Century (and After)*

³ Used when citing from the RCWSA and similar long reports.

⁴ Used when citing from British manuals.

⁵ Usually a reference at the NA.

⁶ These are listed, each citation has been given a unique number which is used in the footnotes, eg WR 1.

Tables

Table 1 British Battalions serving in Tirah and South Africa.

Ser	Unit served Tirah ¹	Attended 1899 Attock Manoeuvres ²	Fought South Africa ³
(a)	(b)	(c)	(d)
1	2 Derbyshires	No	1 st Bn ⁴
2	1 Devons	Yes	Yes
3	2 Green Howards	No	1 st Bn ⁵
4	1 West Surreys	Yes	2 nd Bn
5	1 Gordons	Coy 2 nd Bn	Yes ⁶ + 2 nd Bn
6	1 Dorsets	Yes	2 nd Bn
7	2 KOSB	No	1 st Bn
8	1 Northants	No	2 nd Bn
9	2 R Inniskillings	Yes	1 st Bn + 2 nd Bn
10	2 OXLI	No ⁷	1 st Bn ⁸
11	2 KOYLI	No	Yes
12	1 DCLI	No	2 nd Bn ⁹
13	2 R Sussex	Coy only	1 st Bn ¹⁰
14	1 SLI	Yes	2 nd Bn
15	1 RSF (wing)	No	2 nd Bn

Many Tirah veterans would have fought in South Africa, even if the unit listed in Column (b) did not, due to their mobilisation in the linked British-based battalion. A crude arithmetical calculation would suggest that with generally 7 years regular colour service some 1/7 of a unit's privates would pass to the reserve.

Table 2. pscs South Africa mid-1900.¹¹

Ser	Post	Total	Pscs	% (d) / (c)
(a)	(b)	(c)	(d)	(e)
1	CinCs	2 ¹²	0	-
2	Divisional Commanders	13	3	23%
3	Brigadiers	32	11	34%
4	HQ Combatant Staff	32	24	75%
5	Divisions and Brigades Staffs * ¹	83	42	51%

¹ Capt HF Walters *Operations of the Tirah Expeditionary Force 1897-8* (Simla 1900).

² DPs 7810-106-40 '1899 Attock Report.'

³ J Stirling *Our Regiments in South Africa 1899-1902* (Edinburgh 1903).

⁴ The CO was Smith-Dorrien, a Tirah veteran.

⁵ Both the CO and 2ic were Tirah veterans, *GHG* VII (1900), p 147.

⁶ 600 Tirah veterans present in unit, *RCWSA Evidence* II (1903), Q 19557.

⁷ Unit attended Dalhousie 1900 Manoeuvres; *OXLI Chronicle* (1900), pp 219-221.

⁸ *Ibid* p 32 announced that 25 NWF medals had been distributed in the 1st Bn.

⁹ *The One and All* XI (1900), p 204 notes Tirah veterans serving in the unit.

¹⁰ Ed A Harfield *The Life and Times of a Victorian Officer* (Wincanton 1986), p 206. Col Donne served in Tirah as 2ic of the 2nd Bn transferring to 1st Bn as CO.

¹¹ Col Hale 'The Staff Work in the War' *19C XLVIII* (1900), p 365 with Col (e) and Sers 8 and 9 added.

¹² Buller attended but did not graduate from Camberley.

(a)	(b)	(c)	(d)	(e)
6	Lines of Communication Staffs* ¹	129	22	17%
7	Special Service Officers* ²	169	18	11%
8	Totals	420	120	29%
9	Total less Ser 7	251	102	41%

*¹ Some were ASC officers who were less likely to have attended Camberley. They were employed on logistic staff duties. This did not mean that they were capable staff officers. *² Many not in staff posts.

Table 3. BEF key appointments and pscs 1914.¹³

Ser	Post	Total	Of which pscs	% (d) / (c)
(a)	(b)	(c)	(d)	(e)
1	CinC	1	0	-
2	Corps Commanders	6	5	83% ¹⁴
3	Divisional Commanders	14	12	85%
4	GHQ Principal Staff Officers	6	5	83%
5	Corps BGS	5	5	100%
6	Divisional GSO1s	11	11	100%
7	Total	44	38	86%

Table 4. The 1914-1918 Elite. South African and Tirah Service¹⁵

Ser	Name	Tirah Service	SA Service ¹⁶	Service Category in SA ¹⁷	Later Influential Appointments
(a)	(b)	(c)	(d)	(e)	(f)
1	Kitchener	No	Yes	Command ¹⁸	CinC India, SofS
2	Wolfe-Murray	No	Yes	Staff	QMG, MGO, CIGS
3	Robertson	No ¹⁹	Yes	Staff	See Biographies
4	Douglas	No	Yes	Staff /Command	Div Commander, AG, IGHF, CIGS
5	Murray	No	Yes	Staff	DMT, Inspector Infantry, Div Commander, later CIGS
6	Wilson	No	Yes	Staff	See Biographies
7	Milne	No	Yes	Staff	CinC Salonica
8	Beauchamp-Duff	No	Yes	Staff	AG India, CinC India

¹³ Based on BJ Bond *The Staff and the Staff College* (1972), Appendix V.

¹⁴ There were 5 corps but includes Grierson who died on active service.

¹⁵ J Terraine *The Smoke and the Fire* (1992), Table H.

¹⁶ QAL Jul 1914.

¹⁷ QAL Jan 1914.

¹⁸ Nominally COS but never employed so.

¹⁹ Served NWF 1895, won DSO there.

(a)	(b)	(c)	(d)	(e)	(f)
9	French	No	Yes	Command	See Biographies
10	Haig	No	Yes	Staff/Command	See Biographies
11	Allenby	No	Yes	Regt/Command	See Biographies
12	Hamilton	Yes	Yes	Staff/Command/ Staff/Command	See Biographies
13	Cavan	No	Yes	Command	CinC Italy, CIGS
14	Nixon	Yes	No	N/A	CinC Mesopotamia
15	Lake	No	No	N/A	CinC Mesopotamia
16	Maxwell	No	Yes	SSO/Command	IGF's staff, GS Mediterranean, CinC Egypt
17	Monro	Yes	Yes	Staff	See Biographies
18	Maude	No	Yes	Staff	CinC Mesopotamia
19	Lawrence	No	Yes	Staff/Command	COS BEF
20	Kiggell	No	Yes	Staff	DSD, Commandant Camberley, later COS BEF
21	Horne	No	Yes	Staff/Command	Army Commander BEF
22	H Gough	Yes	Yes	Regt /Command	See Biographies
23	Byng	No	Yes	Staff/Command	Div, Corps and Army Commander
24	Birdwood	Yes	Yes	SSO/Staff/ Command	Staff India, corps and Army Comd
25	Smith- Dorrien	Yes	Yes	Regt/Command	See Biographies
26	Plumer	No	Yes	Command	QMG, Divisional Commander, Corps and Army Comd BEF
27	Rawlinson	No	Yes	Staff/Command	See Biographies

Regt = subordinate service in unit, Command = CO unit/column or formation.

Table 5. Serving Major Generals in 1914 with South African or NW Frontier Service.²⁰

Ser	Arm	All War Service	Of which South Africa	NWF 1897-8	No War Service	Totals
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Cavalry	7	7	-	-	7
2	Infantry	47	34	4	-	47
3	RA	17	13	1	1	18
4	RE	9	4	2	-	9
5	ASC	2	2	-	1	3
6	IA	23	4	9	1	24
7	RM	4	1	-	2	6
8	Totals	109	65	16	5	114
9	Total BR Army only	82	60	7	2	84

Roughly 60% had served in South Africa, when the IA and RM are removed; the proportion is some 75%. Some 15% (less RM and ASC) served on the NWF 1897-8.

Table 6 Official Reports 1899-1902.

Ser	Short Title	NA Reference	Initiated by	Date
(a)	(b)	(c)	(d)	(e)
1	AOD	108/244	SA	
2	AOD	108/245	WO	nd * ²
3	Engineer Arm	108/246	WO/SA	21 Jul 1900
4	Steam Road Transport	108/247	WO/SA	5/10/00 ²¹
5	Organisation and Equipment Engineer Arm (Auxiliary Forces)	108/248	WO/SA ²²	1900
6	Steam Transport ...Heavy Guns	108/249	WO/SA	
7	Cavalry	108/250	SA	8-16/11/00 ²³
8	Lines of Communication	108/251	SA	
9	Medical	108/252	SA	16/7/00
10	11 Division	108/253	SA	17/7/00
11	7 Division	108/254	SA	26/7/00
12	Chaplain's Department	108/255	SA	10/7/00
13	Signalling	108/256	SA	14/7/00
14	Postal	108/257	SA	14/7/00
15	Transport Services	108/258	SA	15/7/00
16	Provost Marshal	108/259	SA	15/7/00
17	AG's Dept	108/260	SA	14/7/00
18	Remounts	108/261	SA	17/7/00
19	Press Censorship	108/262	SA?	7/00

²⁰ AL 1914.

²¹ Date sent by Roberts.

²² Much data from RE main report. This version printed 1901, compilation in 1900.

²³ WO 108/250 p 2 states 1901, in view of other letters, this date was a typographic error.

(a)	(b)	(c)	(d)	(e)
20	Imperial Yeomanry	108/263	SA	16/10/00
21	Casualties	108/264	SA	13/11/00
22	AVD	RCWSA ²⁴	SA	15 7 00
23	Pom Poms	108/265	WO	1900 *1
24	Pom Poms	²⁵	SA	1900?
25	Heavy Artillery	108/266	WO	nd*7
26	Machine Guns	108/267	WO	1900
27	LsofC Natal	108/268	SA?	Dec 1900
28	Medical Report ... Natal	²⁶	SA?	1/1/01
29	Field Intelligence Nov 1900-1902	108/269	SA ²⁷	13/6/02
30	Field Intelligence	108/270	SA?	Jul 1900?
31	Pigeon Posts	108/271	SA?	19/9/02
32	Reports by OCs Units SA 1899-1901 Small Arms	108/272	WO	18/6/01
33	" " " " " " Swords, Lances, Pistols	108/273	WO	9/9/01
34	" " " " " " Valise Equipment etc	108/274	WO	nd*
35	" " " " " " Mule Harnesses etc	108/275	WO	nd*4
36	" " " " " " Vehicles	108/276	WO	nd*3
37	" " " " " " Blankets etc	108/277	WO	nd*5
38	" " " " " " Signals Equipment etc	108/278	WO	nd*6
39	" " " " " " Guncotton etc	108/279	WO	nd*6
40	" " " " " " Clothing	108/280	WO	(1901)
41	Answers to Questions from Various Branches of QMG's Department by Various Officers .. [SA]	108/281	WO	(1901)
42	Remounts	108/282	WO	5/9/02
43	History of the Telegraph Operations During the War in [SA] 1899-1902	108/376	WO	(1903)
44	Report on Steam Transport in [SA]	108/377	WO	(1903) ²⁸
45	Report on Surgical Cases Noted in the [SA] War	108/389	WO	(1905)
46	Report... Medical Arrangements... [SA] War	108/390	WO	(1904)
47	Lt Gen Lyttelton's Reports on Horses Supplied during the [SA] War	²⁹	WO	5/7/02 ³⁰

²⁴ RCWSA Appendices pp 101-2. It does not apparently survive elsewhere.

²⁵ WO 108/265 refers. It was typed by July 1900 and probably was part of the SA series. It does not seem to have survived.

²⁶ Contained within WO 108/390.

²⁷ The signature block is South African, but the WO may have demanded it.

²⁸ Report signed 27/9/02 at Capetown.

²⁹ Not apparently in NA but Appx 58 RCWSA Appendices reproduces it.

³⁰ Data requested by SA AO 12/2/02. The WO later asked for information on 9/5/02. The format was apparently a questionnaire to column commanders.

(a)	(b)	(c)	(d)	(e)
48	Report by Field-Marshal ...Roberts... on the Field Transport	RCWSA <i>Appendices</i>	WO	25/3/01
49	<i>A Report on the Demobilization of the South African Field Force 1st June 1902-28th February 1903 HQ Pretoria 1 April 1903 (Pretoria J Keith 1903)</i>	TVA	SA	1/4/03
50	<i>Recommendations of the Committee directed to consider Sir Thomas Gallwey's Medical Report of the Campaign in Natal 1899-1900</i>	WO 33/195 ³¹	BR?	27/7/01
51	<i>Report upon the Organisation and Equipment of Medical Units ... South Africa</i>	WO 33/195 ³²	SA	7/7/00
52	<i>Lt Col Girouard History of the Railways During the War in South Africa 1899-1902 (1903)</i>			
53	Report on the Working of Armoured Trains	WO 108/414	SA	17/1/02

*1 5/01 may be date printed. *2 9/01 may be date printed, contains a report made on 16/7/00 following a letter of 9/6/00. *3 9/01 may be date printed *4 (E&S 8/01) went to press 13/8/01.

*5 (E&S 10/01) may be date printed. *6(E&S 11/01). *7 (E&S 5/01) South Africa Circular Letter forwarded 11/1/01. *8 E&S 8/01 to press 12/8/01 *9 to press 9/9/01

Table 7. Disciplinary Offences 1898-1912.³³

Ser	Year	Average Strength	Number CMs	CM Offences	Number Imprisoned	% of Army CMed	% of men fined drunk
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	1898	225,027	9676	14,044	8001	4.47%	6.6%
2*	1904	287,240	12,017	16,382	10243	4.5%	5%
3	1906	263,117	8125	11053	6725	3.24%	4.5%
4	1908	251,324	7181	10083	6338	3.11%	6.8%
5	1910	252,686	6433	9404	6345	2.72%	5.00%
6	1912	253,762	5161	7557	4380	2.18%	4.62%

* Incomplete data 1899-1903.

³¹ Does not contain report just comments.

³² Does not contain report just comments.

³³ GARs 1898, 1904, 1912.

Table 8. Education Certificates 1903-1912.³⁴

Ser	Year	Average Strength	NCOs and Men on Regt Strength with Education Certificates	% (d) of (c)
(a)	(b)	(c)	(d)	(e)
1.	1903	303,600	79,860	26.3
2	1904	267601	111,928	41.8
3	1905	254,748	120,754	47.4
4	1906	245,978	128,749	52.3
5	1907	232,154	129,308	55.7
6	1908	235,409	139,065	59.0
7	1909	237, 205	148,025	62.4
8	1910	236,496	159,778	67.6
9	1911	237,722	168,148	70.7
10	1912	234,901	172,670	73.5

The totals in Cols (c) of Tables 7 and 8 do not agree. The author is satisfied that he has copied correctly and suspects that Table 7 involves the Army's total strength while Table 8 just totals soldiers, perhaps less recruits; officers were assumed, correctly or not, to be educated.

Table 9. Cavalry Ratios Western Front August 1914.³⁵

Ser	Formation	Britain	France	Germany
(a)	(b)	(b)	(c)	(d)
1	Infantry Divisions	6	62	72
2	Cavalry Divisions	3 *1	9	10
3	Ratio	1:2	1:7	1:7

*1 The British total is expressed in continental cavalry division equivalents (ie a 6 regiment cavalry division). The British cavalry division of 4 brigades was double the French and German and is treated as 2 divisions. The third divisional equivalent consists of an independent brigade, 3 units acting as divisional cavalry and army mounted troops. If cyclist companies are added this would add a further 1½ units. It has not been possible to include German and French divisional cavalry in the totals in ser 2. Even if these were included, the ratio would be unlikely to approach 1:6.

Table 10. To Illustrate Mobility versus Staffwork.

Ser	Hours Elapsed	Distance travelled at 4 Kph	Distance travelled at 4.4 Kph
(a)	(b)	(c)	(d)
1	1	4	4.4
2	2	8	8.8
3	3	12	13.2
4	4	16	17.6

After 4 hours the faster force will have gained 1.6 kms or a time interval of 24

³⁴ *GARs 1909& 1912.*

³⁵ *MOFB I Appendices 2,3, 6.*

minutes. But superior staff and communications which allow faster decisions say saving an hour will gain 4 kms. Saving time means less expenditure of effort, unlike faster marching.

Table 11. South Africa. Views on Machine Guns.³⁶

Ser	Arm of Respondent	Number	Positive	Undecided/No Reply	Anti	% (d)' (c)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Cavalry	24	18	4	2* ¹	75%
2	MI	19	13	5	1* ²	68%
3	Infantry	119	69	35* ³	15	58%
4	RA	2	0	1	1* ⁴	* ⁵
5	Total	164	100	45	19	

Notes:

*¹ Lt Col Miles, one of those critical, had his unit's weapons withdrawn but felt that 'each ... battalion should have two.'

*² Maj Gen Hutton noted their theoretical value but commented that, due to carriage defects, they were of 'small value'. He was incorrectly recorded as cavalry; in fact he was a rifleman and MI expert. *³ 20 had not used the weapon in action or used it only once. *⁴ Possibly due to this unit's obsolescent .45 cal Maxims. *⁵ Too small for statistical confidence.

Table 12 Brigadiers and above South Africa. Views on Machine Guns.³⁷

Ser	Arm	Total	Positive	Undecided /No Reply	Anti
(a)	(b)	(c)	(d)	(e)	(f)
1	Cavalry	3	2	1	0
2	MI	1	0	0	1
3	Infantry	18	10	4 * ¹	4* ²
4	Total	22	12	5	5

Notes:

*¹ One admitted to little experience, another commented on machine guns' size problem in attack.

*² Methuen criticised machine guns' handling and commented that South African conditions were unsuited to the weapons but felt they had defensive value as did Maj Gen Jones.

Table 13 Cavalry Views of Carbine Accuracy.³⁸

Ser	Group	Total	Satisfied	No reply/ Comment	Dissatisfied
(a)	(b)	(c)	(d)	(e)	(f)
1	Cavalry Brigadiers	4	1	1	2
2	Cavalry COs	30	7	13 (3 ³⁹)	10

³⁶ WO 108/267.

³⁷ Ibid.

³⁸ WO 108/272.

³⁹ Ibid pp 146-8, Nos 72, 75, 91.

Table14. Increases in the Arms between 1899/1900 to 1904/1905.⁴⁰

Ser	Item	Increase	Decrease
(a)	(b)	(c)	(d)
1	Cav Regts	-	-
2	RHA Btys	+ 9	
3	RFA Btys	+ 55	
4	RGA Coys	+ 4	- 2 Mtn Btys
5	Engr Tps, Coys	+21 ½	
6	Bns Inf	+ 14	
7	ASC	+ 1263 Pers	

There were reductions in batteries and battalions after 1905; what is significant, however, is the trend

Table 15. Guns/Men Ratio 1896-1914 in Major Armies.

Ser	Nation	Guns/1000 bayonets in army corps 1896 ⁴¹	Guns/1000men 1914 ⁴²
(a)	(b)	(c)	(d)
1	Britain	4	6.3 ⁴³
2	France	4.5	4
3	Austria Hungary	3	3.25
4	Russia	2.9	4.4
5	Germany	5	6.0 ⁴⁴
6	Average	3.8 or 4.5 for sers1,2,5 only.	4.8 or 5.4 for sers1,2,5 only.

⁴⁰ AFPs 50314 'Marker Memorandum.'

⁴¹ RCWSA Appendix VI p 226.

⁴² FSPB 1914 p 258.

⁴³ Maj Bailey *Field Artillery and Firepower* (Oxford 1989), Figure 3.

⁴⁴ FSPB 1914 disagrees with Bailey, who gives the French 4.8 guns, and Germany 6.4.

Table 16. Methods of Transport Compared, based on moving an Infantry Division's Supplies.⁴⁵

Ser	Means	Men Needed	Animals Needed	Vehicles Needed	Speed (mph)	Max Daily Distance (Miles)	Column Length (Yards)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Current (horsed)	1910	3820	436	3	30	6445
2	140 Lorries	280	-	280 (includes 140 trailers)	6	100	2100
3	47 traction trains	94	-	188	4	60	1410
4	Pack Horses	1900	7600	-	4	30	45,600
5	Porters	56,000	-	-	2.5	?	56,000

Ser 1 shows the current means of moving supplies, sers 2-5 show other types of transport moving the same quantities of supplies.

Table 17. Musketry Comparison 1898-1903.

1898 Trained Men Range Course ⁴⁶					1903 Trained Men Range Course ⁴⁷			
Ser	Type of Fire	Rds	Remarks	MRs 1898 Practice	Type of Fire	Rds	Remarks	MRs 1903 Practices
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Deliberate Individual	42		1-6	Independent	35		1,3,5,6, 8
2	Deliberate Volleys	21		7,10, 13	Rapid Independent	28	*1	2,4,7,9
3	Rapid Volleys	21		8,11, 14	Snap	35	*1	10-13, 16
4	Rapid Independent	14		9,12	Moving	15		14-15
5	Attack Practice	21		15	Skirmishing	10		17
6	Moving	-	*3	-	Fixed Sight	7		18
7					Long-range Independent	10	*2	19
8	Totals	119				140		

Cols (e) and (i) refer to the relevant practice in MRs.

*1 Includes magazine practices.

*2 Marksmen and 1st Class Shots only 800 yds.

*3 Discretionary practice, no ammunition scale.⁴⁸

⁴⁵ Lt Col Terry 'The Future of the Corps...' *ASCQ* III (1909), pp 271-3.

⁴⁶ *MRs 1898* pp 26-7.

⁴⁷ *MRs 1903* pp 9-11.

⁴⁸ *MRs 1898* p 103.

Table 18. Use of Cover Trained Soldiers’ Practices 1898-1903.⁴⁹

Ser	Type	1898 Practices	1903 Practices
(a)	(b)	(c)	(d)
1	Lying	3,5, 6,13,14	8,19
2	Lying using cover	-	4,7,9,12
3	Using other cover	-	2,11,13,15,16

Numbers in cols (c) and (d) refer to practices in *MRs*. Attack and skirmishing practices have not been included.

Table 19 Range Comparison Trained Soldiers’ Practices 1898-1903.⁵⁰

Ser and Practice No	1898 Range	1903 Range
(a)	(b)	(c)
1	200	200
2	200	200
3	500	300
4	500	300
5	600	400
6	800	500
7	300	500
8	300	600
9	300	400
10	500	150
11	500	150
12	500	200
13	600	200
14	800	150
15	200-800	200
16	-	200
17	*1	200
18	-	200
19	-	800 *2

*1 Attack Practice no range given. It is likely that this involved some use of cover but as conditions varied with the ranges used there is no certainty of this. *2 Marksmen and 1st Class Shots only.

It is apparent that ranges were considerably less in the 1903 practices.

⁴⁹ *MRs 1898&1903.*

⁵⁰ *MRs 1898&1903.*

Table 20. Artillery Increases in Formations 1899-1908.

Ser	Type	1899 ⁵¹	1902 ⁵²	1908 ⁵³	Notes
(a)	(b)	(c)	(d)	(e)	(f)
1	Infantry Division Fieldguns	18	36	54	Col (e) sers 5,6 are divisional figures, cols(c) and (d) sers 7 and 8 include a share of corps artillery.
2	Corps RHA	12	12	-	
3	Corps Fieldguns	18	-	-	
4	Corps 5" Howitzers	18	18	-	
5	Divisional 4.5" Howitzers	-	-	18	
6	Heavy Guns	-	12* ¹	4	
7	3 divisions' guns + Corps pieces	54 (3x18) + 48 (corps wpns) = 102	108(36x3)+ 42(corps wpns) = 150 ⁵⁴	76x 3= 228	
8	Barrels per division	34	50	76	

Howitzers in 1899 were 17% of ser 7 col (c), in 1908 25% of total in ser 7 col (e). Furthermore the 4.5" Howitzer was qualitatively much superior to the 5" Howitzer being QF. There was also an increase in heavy artillery, while with the elimination of the Corps RHA the average calibre rose. For ser 7 it has been assumed that like the SAFF, the corps contained 3 divisions. Continental practice was usually for 2 divisions; however *WEs 1898* does not specify this. The 1908 total is unaffected by this issue as there were no corps based pieces. In 1902 assuming a 2 division corps there would have been 57 pieces per division.

*¹ Corps weapons.

Table 21 Artillery Engagement Ranges in Training.⁵⁵

Ser	Year	Range	Remarks
(a)	(b)	(c)	(d)
1	1897	1500	
2	1898	1540	
3	1899	2148	
4	1900	2329	
5	1901	2648 3209	12 batteries 10 "

In India 11 batteries of one command fired at an average of 4210 yards in 1901-2.⁵⁶

⁵¹ *FAD 1896* p 2.

⁵² *FAT 1902* pp 1-2.

⁵³ *FAT 1914*.

⁵⁴ Depends whether 3 or 2 divisions in the corps.

⁵⁵ *RCWSA Evidence I* p79.

⁵⁶ *L/MIL/7/15890 'IAR 1901-2'* p 4 para15. Artillery ranges in India had more terrain.

Table 22. Planned Ranges in Action 1896.⁵⁷

Ser	Type	Range (yds)
(a)	(b)	(c)
1	Distant Artillery	3500-2500
2	Medium Artillery /Long Infantry	2500-1500
3	Decisive Artillery/Infantry	0-1500 500

Table 23. Planned Ranges in Action 1902.⁵⁸

Ser	Type	Rifle	Field Gun	Heavy Gun
(a)	(b)	(c)	(d)	(e)
1	Distant	3000-2000	6000-4500	10,000-6000
2	Long	2000-1500	4500-3500	6000-4000
3	Effective	1500-800	3500-2000	4000-2500
4	Decisive	800-0	2000-0	2500-0

Table 24. British, French and German Field Guns.

Characteristic	18 Pounder ⁵⁹	75mm ⁶⁰	1896 77mm ⁶¹
(a)	(b)	(c)	(d)
Max elevation	+ 16° to - 5°	+12° to -5.5°	+ 16° to -12°
Max Range (yards)	6200	6010 shrapnel 9295 HE	7655 shrapnel * ³ 9186 HE
Weight of Gun	25.1 cwt	18.75 cwt	19.3 cwt
Ammunition Natures and shell weights	Shrapnel 18.5 lbs Star/Incendiary * ⁴	Shrapnel 16 lbs HE 11 lbs 3 ozs	Shrapnel] 15 lbs HE]
Rounds per gun * ¹	176	312 * ⁵	792 * ²
Ammunition Type (see Glossary)	Fixed	Fixed	Fixed
Shield Thickness	.125 in	.197 in	.154 in
Muzzle Velocity (fps)	1590	1736	1526

*¹ This is the rounds per gun held in the battery first line scale.

*² 36 were HE (WO 33/614). Using the carriage figures (sers 167-171 of the reference) and the vehicle holdings (ser 186) per battery; I calculate that this as 172 rpg, 792 rpg could not have been carried with the transport listed in the document. *³ WO 33/614 notes the maximum sight setting as 6600 and the maximum fuze range as 5500 yards. *⁴ *FAT 1914* gives no starshell scale. It can possibly be deduced that the French and Germans intended to fire Direct at closer ranges than the British due to the greater armour thickness on their gun-shields. *⁵ 36 were HE.

⁵⁷ *FAD 1896*.

⁵⁸ *FAT 1902*.

⁵⁹ WO 33 614 'Comparative Table Artillery Equipment 1912.'

⁶⁰ *Handbook of the French Army 1914* (Nashville Republished 1995).

⁶¹ *Handbook of the German Army in War* (1918). The weapon had changed significantly since 1896

Table 25. The Ages of Selected Officers 1900.⁶²

Ser	Name	Age 1900	Subsequent Career
(a)	(b)	(c)	(d)
1.	Roberts	68	CinC, member CID
2	White	65	Governor Gibraltar
3	Clery	62	None
4	Buller	61	Briefly reverted to CinC Aldershot
5	Kelly-Kenny	60	AG
6	Warren	60	None
7	Gatacre	57	Briefly reverted to Eastern District
8	Methuen	55	Corps then CinC S Africa
9	Kitchener	50	CinC India, Egypt, Secretary of State War
10	French	48	CinC Aldershot, IGF, CIGS, CinC BEF
11	I Hamilton	47	MS, MA Manchuria, GOC S Command, AG, IGOF & CinC Med , CinC Gallipoli
12	Smith Dorrien	43	Div Command India, CinC Aldershot, Corps and Army Comd BEF, CinC East Africa
13	Haig	40	Corps, Army and CinC BEF
14	H Gough	30	Brigade-Army Commander BEF
15	Rimington	42	Bde Comd, IGC India, Cavalry Division
16	Robertson	41	Staff, QMG and COS BEF, CIGS

Table 26. Education Statistics Recruits OXLI 1907-11.⁶³

Ser	Standard	1907	1908	1909	1910	1911
(a)	(b)	(c)	(d)	(e)*1	(f)	(g)
1	Good	-	2		12	9
2	Fair	72	14		45	49
3	Moderate	138	85		27	50
4	Inferior	7	123		51	48
5	Illiterate	1	162		14	7
6	Untested	10	8		-	4
7	Gained Certificates in Special Reserve	-	-		-	15

*1 Not available.

⁶² Sers 1-10 'Englishman' 'The Causes of Reverse' NR XXXIV (1900), p 838; sers 11- 16 QAL various dates.

⁶³ OXLIC for respective year.

Table 27. Education Recruit Sappers after dismissal from Drill 1910-11.⁶⁴

Ser	Section	After dismissal from Drill Education FOM	Final Education FOM
(a)	(b)	(c)	(d)
1	1	42.9	42
2	2	44.3	45.9
3	3	38	45
4	4	37.5	55.5

Col (b) represents the division of the intake into 4 sections.

In Cols (c) and (d) a 1st Class Certificate counted 100 marks

“ 2nd “ “ “ “ “ 70 “

“ 3rd “ “ “ “ “ 50 “

Sub-categories of 3rd Class ranged from 50-10.

Table 28 British Officers Observing the Russo-Japanese War or in the Theatre.⁶⁵

Ser	Name	Affiliation	Attached	Remarks
(a)	(b)	(c)	(d)	(e)
1	Capt DS Robertson**	RS Fusiliers	Japan	Later psc
2	Lt Col AL Haldane psc Int	GS and Gordons	Japan	Later Corps commander
3	Col JWG Tulloch	IA	Japan	Indian representative
4	Lt Gen I Hamilton qs ⁶⁶	Gordons	Japan	“ “
5	Capt JB Jardine*	5 Lancers	Japan	Bde Comd 14- 18
6	Capt AHS Hart-Synott psc * FR Int	E Surreys	Japan	⁶⁷
7	Brevet Col WH Birkbeck psc	1 DG	Japan	Later major general
8	Lt Col CV Hume psc ⁶⁸ Int	RA	Japan	MA Tokyo & Korea
9	Capt B Vincent ⁶⁹ *	RA later Cavalry	Japan	Later psc, DS Quetta. Senior staff officer and bde comd 1914
10	Capt CAL Yate psc FR GE Int	KOYLI	Japan	KIA 1914 won VC
11	Col W A Smith psc	RA	Japan	
12	Maj CM Crawford ⁷⁰	5 Ghurkhas	Japan	Indian rep

⁶⁴Ward *Standardisation* pp 6-8.

⁶⁵Based on ALs and FO 46/592 Schedule.

⁶⁶FO 46/592 listed Indian SSO.

⁶⁷Served Tirah.

⁶⁸Hume had served under Roberts as an ADC and as senior IO in South Africa. See WO 105/19 File CinC/792 Note 27 Aug 1900. Described as MA Tokyo and Korea Army List 1905.

⁶⁹Served Boxer Rising. Later DS Quetta; has the rare distinction of attracting JFC Fuller's praise!

⁷⁰Served China 1900-01.

(a)	(b)	(c)	(d)	(e)
13	Capt Sir A Bannerman ⁷¹	RE	Japan	Later DS Camberley
14	Lt Gen CJ Burnett psc ⁷²	Late E Yorks	Japan	Later GOC Western Dist
15	Lt Gen WG Nicholson qs Int	Late RE	Japan	later CIGS
16	Lt Col E Agar psc RU Int	RE	Japan	
17	Maj JM Home psc RU GE Int	Commissioned RA transferred IA Infantry	Russia	Only 4 years in RA
18	Col WHH Waters psc RU GE FR Int	Late RA	Russia	MA Berlin and Russia
19	Gen M Gerrard RU, Int	6 years RA, then IA cavalry	Russia	MA Russia 1892-3
20	Maj GHG Mockler ⁷³	IA	Russia	
21	Capt Eyres RN ⁷⁴	RN	Russia	MA with Far East Fleet.
22	Lt Col WG Macpherson ⁷⁵	RAMC	Japan	GS Medical adviser, lectured Quetta
23	Maj RW Boger psc ⁷⁶	RA	Japan	Later MA Tokyo
24	Cdr EW Wemyss	RN	Japan	witnessed landing
25	Lt H Edwards	RN	Japan	witnessed landing
26	Lt AC Barnaby	RMLI	Japan	witnessed landing
27	Capt HC Holman psc ⁷⁷ Int RU	IA (cavalry)	Russia	
30	Maj RT Toke ⁷⁸ *	Infantry	Japan	AMA Tokyo
32	Maj GE Pereira ⁷⁹	Infantry	Japan	MA Seoul
33	Col R Bannatine- Allason ⁸⁰	RA	Japan	

⁷¹ First CO the Air Battalion, appointed GS Jan 1908.

⁷² MA Japanese Army 01/03/05-2/12/05.

⁷³ Served China 1900-02.

⁷⁴ Attempted to join Russian fleet at Port Arthur and entered Japanese lines, causing dismay in Russia.

⁷⁵ Attached Japanese 24/03/04-21/12/05. Later PMO 4 Division Quetta and lecturer at Quetta.

⁷⁶ No mention in BORs but mentioned in Haldane (AMS 3/4/06). He served with 2 Japanese Army. Boger died while MA Tokyo 1911.

⁷⁷ Previously did 2 Intelligence jobs, one in China.

⁷⁸ AMA Tokyo 19/4/04- 27/11/05 then special employment Tokyo Feb-Mar 06. Had served in China during Boxer Rising.

⁷⁹ Served in China 1900. Later qualified in Chinese though not by 1906.

⁸⁰ ANG (1909), p 53, served Manchuria Apr-Dec 1905.

(a)	(b)	(c)	(d)	(e)
34	Capt Thacker ⁸¹	Canadian Artillery	Japan	
35	Lt Col GH Fowke ⁸²	RE	Japan	Later general
36	Maj CM Crawford	IA (Inf)	Japan	
37	Col Hoad ⁸³	Australia	Japan	
38	Col Lewis ⁸⁴	RE	Japan	
39	Capt WA Adams***	5L	Japan	Language student
40	Lt FSG Piggott***	RE	Japan	Language student
41	Lt WA Harrison	RE ⁸⁵	Japan	Language student
42	Capt EF Calthorp ***	RA	Japan	Language student

Only those RN and RM officers who either made reports on army operations or were ashore for long periods are included.

*** Listed Schedule FO 46/592 as Language Officer
** Qualified Japanese and Chinese see *AL 1906*
GE German interpreter
Int previous Intelligence job

* Qualified JA see *AL 1906*
FR French interpreter
RU Russian interpreter

⁸¹ See Haldane *Saga* p 207, BL Add Mss 50317 for his report on Japanese Field Artillery. JM Hitsman and D Morton 'Canada's first Military Attaché: Capt HC Thacker in the Russo-Japanese War' *Military Affairs* 34 (1970).
⁸² *REJ* IV (1906), p 163, accompanied Nicholson, present at the siege and capture of Port Arthur.
⁸³ HuPs 50086 Hutton/Nicholson 8/4/04. Hoad was apparently appointed for political reasons. He later had an influential career in the Australian Army.
⁸⁴ In Japan 1905 and corresponded with WO, FO 46/592 but not on schedule.
⁸⁵ Piggott *Thread* p 25.

Table 29. Commanders and Staff of 1st Army Corps 1899⁸⁶

Ser	Name	Post	psc	Previous Post
(a)	(b)	(c)	(d)	(e)
1	Gen Buller	GOC Corps	no	GOC Aldershot
2	Col Stopford	Mil Sec to GOC	yes	WO
3	Maj Gen Hunter	COS Corps	no	None given (GOC Quetta) ⁸⁷
4	Col Wynne	Deputy AG Corps	no	AMS WO
5	Col Miles	AAG Corps	yes	Comdt Camberley
6	Col Douglas	AAG Corps	no	AAG Aldershot
7	Lt Col à Court	DAAG Corps	yes	MA Brussels
8	Maj Kiggell	DAAG Corps	yes	DAAG Instr Dover
9	Maj Lewis	DAAG Corps (ASC)	no	Portsmouth
10	Maj Thomas	DAAG Corps (ASC)	no	Not given
11	Maj Byng	PM Corps	yes	DAAG Aldershot
12	Maj Altham	AAG Int, Corps	yes	DAAG Int Army HQ
13	Maj Evans	DAAG Int, Corps	yes	DAAG Instr York
14	Capt Gordon	DAAG Int, Corps	yes	BM Malta
15	Lt Col Verner	DAAG Topography Corps	yes	RMC instructor
16	Maj Sclater	SO RA Corps	no	BM RA Aldershot
17	Maj Bethell	SO RE Corps	yes	Aldershot
18	Maj Jones	Censor Corps	yes	“
19	Maj Rhodes	Director Sigs Corps	no	DAAG Signals Aldershot
20	Lt Gen Methuen	GOC 1 Div	no	Corsham Court
21	Col Mainwaring	AAG 1 Div	no	AAG Portsmouth
22	Lt Col Northcott	DAAG 1 Div	yes	Commissioner Gold Coast (on leave)
23	Maj Warner	DAAG 1 Div (ASC)	yes	Devonport
24	Maj Gen Colville	Comd 1 Bde 1 Div	no	Comd Inf Bde Gibraltar
25	Capt Ruggles-Brise	BM 1 Bde 1 Div	yes	BM “ “
26	Maj Gen Hilyard	Comd 2 Bde 1 Div	yes	Comd Inf Bde Aldershot
27	Maj Monro	BM 2 Bde 1 Div	yes	BM “ “
28	Maj Gen Clery	GOC 2 Div	yes	DAG HQ
29	Maj Cooper	ADC GOC 2 Div	yes	DAAG Int WO
30	Maj Bvt Col B Hamilton	AAG 2 Div	yes	Depot E YORKS Beverley
31	Capt Gogarty	DAAG 2 Div	yes	BM Shorncliffe
32	Capt Boyce	DAAG 2 Div (ASC)	no	Staff captain Cork

⁸⁶ WYNPs 7508-32; signed Coleridge Grove 2/10/99.

⁸⁷ DH Doolittle *A Soldier's Hero* (Narrangasset 1991). p 187.

(a)	(b)	(c)	(d)	(e)
33	Maj Ellison	APM 2 Div	yes	DAAG Instr Aldershot
34	Maj Gen Wauchope	Comd 3 Bde 2 Div	no	Niddrie nr Edinburgh
35	Bvt Lt Col Ewart	BM 3 Bde 2 Div	yes	DAAG Devonport
36	Maj Gen Lyttelton	Comd 4 Bde 2 Div	no	Comd 2 Bde Aldershot
37	Capt Wilson	BM 4 Bde 2 Div	yes	BM 2 Bde Aldershot
38	Maj Gen Gatacre	GOC 3 Div	yes	GOC Eastern District
39	Col Allen	AAG 3 Div	yes	AAG HQ
40	Lt Col Waters	DAAG 3 Div	yes	DAAG Int Branch
41	Maj Hobbs	DAAG 3 Div (ASC)	no	DAAG Woolwich
42	Maj Sladen	APM 3 Div	yes	DAAG Colchester
43	Maj Gen Hart	Comd 5 Bde 3 Div	yes	Comd 1 Inf Bde Aldershot
44	Maj MacGrigor	BM 5 Bde 3 Div	yes	BM Aldershot
45	Maj Gen Barton	Comd 6 Bde 3 Div	yes	United Service Club ⁸⁸
46	Capt MacBean	BM 6 Bde 3 Div	yes	Army and Navy Club
47	Col French	GOC Cav Div	no	Comd Cav Bde Aldershot
48	Col Gough	AAG Cav Div	yes	WO ⁸⁹
49	Maj Haig	DAAG Cav Div	yes	BM Cav Bde Aldershot
50	Maj Welch	DAAG Cav Div(ASC)	no	Edinburgh
51	Capt Lawrence	DAAG Intelligence	yes	DAAG Int wo
52	Maj Gen Babington	Comd 1 Cav Bde	no	Temporarily comd Cav Bde Aldershot
53	Capt Briggs	BM 1 Cav Bde	no	Temporarily BM Cav Bde Aldershot
54	Col Brabazon	Comd 2 Cav Bde	no	Comd 2 Cav Bde
55	Capt Brand	BM 2 Cav Bde	no	BM Cav Bde

Table 30 Organisation of Divisions Britain, France and Germany 1914.⁹⁰

Britain

Infantry Division of 3 Brigades, each brigade of 4 battalions, each battalion of 4 rifle companies. Two battalion machine guns. Total 12 battalions.

Divisional Artillery 3 Field Artillery Brigades, each of 3 batteries, each of 6 x 18 Pdr

⁸⁸ One assumes this was a leave address.

⁸⁹ RPs 7101-23-110-2 F297 Roberts/Lansdowne 1/1/00, Buller had not allowed Gough to take over as AAG due to his excitability, he had been viewed as insane since the 1880s!

⁹⁰ *MOFB 1914 I* (1922), Appendices 2, 4, 7.

Guns.

1 Field Artillery Brigade of 3 batteries, each with 6 x 4.5" Howitzers

RGA Battery of 4 x 60 Pdr Guns Total 76 pieces.

2 Field Companies RE

1 Signal Company RE

1 Squadron Cavalry

1 Company Cyclists

Cavalry Division 4 brigades, each of 3 regiments, each of 3 squadrons, each of 4 troops. 2 machine guns per regiment.

Divisional Artillery of 2 RHA Brigades, each of 2 batteries, each of 6x 13 Pdr Guns

1 Division Signals Squadron

1 Field Squadron RE

France

Infantry Division of 2 Brigades, each of 2 regiments, each regiment of 3 battalions.

Total 12 battalions

Each battalion of 4 rifle companies and 2 unit machine guns.

3 Artillery groups, each of 3 batteries each with 4 guns (36 guns)

1 Cavalry Squadron

1 Engineer Company

Cavalry Division 3 cavalry brigades, each of 2 regiments

1 Horse artillery brigade of 2x 4 gun batteries

Cyclists 324 soldiers

Germany

Infantry Division 2 Infantry brigades, each of 2 regiments, each regiment of 3 battalions. Total 12 battalions. Machine gun company (6 guns) for each regiment.

Artillery Brigade (72 guns and light howitzers)

Cavalry Regiment.

1 and ½ companies pioneers.⁹¹

Cavalry Division 3 cavalry brigades of 2 regiments each

Horse Artillery Abteilung 3x4 gun batteries

Battalion Jaegers and machine gun company. (12 machine guns)⁹²

Both French and German Infantry organisations were clumsy as there was an additional level of command which meant additional staff officers, staffwork and slower passage of orders.

⁹¹ One division had 2 companies and the other one. Pioneers unlike British sappers were not tradesmen

⁹² Some divisions had more jager battalions. Edmonds does not include the jager machineguns. A correct total is included here. Some jaegers were lorry-borne.

Table 32. All Staff Rides, Tours and Similar Exercises held between 1893-1899.

Ser	Dates	Location	Reference	Type	Remarks
(a)	(b)	(c)	(d)	(e)	(f)
1	7-11/9/74	Chichester	Hamley ⁹³	Exercise	Staff College
2	Sep 1874	Sussex	Hamley ⁹⁴	Exercise	Staff College
3	1892	Leith Hill	<i>JRUSI</i>	TEWT	HDTs
4	1893	Reading	<i>JRUSI</i>	TEWT	HDTs
5	1894	Sussex	<i>BA</i>	TEWT	HDTs
6	1894	Unclear	MePs	TEWT	Probably Home District
7	1895	Sussex	MePs	Staff Ride	Led by Buller
8	1895	Ascot	MePs	TEWT	Probably Home District
9	1897	Ireland	HuPs	Staff Ride	Irish Command, probably first ride held in Ireland.
10	1897	Goring	<i>ANG</i>	Cavalry Staff Tour	Haig chief SO ⁹⁵
11	1898	Aldershot	<i>USG</i> ⁹⁶	Staff Ride	Aldershot Command
12	1898	Ireland	HuPs	Staff Ride	Irish Command
13	1899	India	<i>JUSII</i>	Staff Ride	District level led by Brig Gen Hart
14	1-5 Apr 1899	Sussex	<i>BA</i> ⁹⁷	Army Staff Tour	led by Wolseley

Table 33. To Show Staff Rides, Tours etc 1902-1914.

Ser	Dates	Location	Reference	Type	Remarks
(a)	(b)	(c)	(d)	(e)	(f)
1	17-19/2/02	Bombay	OXLIC	Staff Ride	
2	12-17/4/02	Hastings/Seven Oaks	WO 279/5	Staff Tour	II Army Corps
3	7-11/7/02	East Anglia	WO 279/6	Staff Ride	Eastern District
4	1-5/9/02	Somerset Devon	Report ⁹⁸	District Staff Ride	Conducted Lt Gen Butler
5	29/3-4/4/03	Salisbury-Andover	WO 279/516 ⁹⁹	Corps GS officers Staff Ride	Led by CSO
6	27/4-2/5/03	Calne-Amesbury	WO 279/516 ¹⁰⁰	Selected generals others	Led by Wood

⁹³ Col Hamley *Staff College Exercises 1874* (Edinburgh 1875), pp 10-72.

⁹⁴ *Ibid* pp 73-110.

⁹⁵ HPs 3155-32a 'Scheme for a Staff Tour 4-9/10/97' may refer to this tour.

⁹⁶ *USG* 26/3/98 p 248 claims it as the first held at Aldershot.

⁹⁷ *BA* 18/3/99 p 304.

⁹⁸ Lt Gen Butler *Record of the Western District Staff Ride Conducted 1st to 5th September* (1902 np).

⁹⁹ 'II Corps Report on Preliminary Training 13/10/03' p 3.

¹⁰⁰ *Ibid*.

(a)	(b)	(c)	(d)	(e)	(f)
7	22- 27/2/04	Jhelum	<i>Cavalry Studies</i>	Cavalry Staff Ride	Set by Haig
8	Feb 1904	Barbados	<i>ANG</i> ¹⁰¹		
9	Mar 1904	Sussex	WO 27/503	1 st Army Corps Staff Ride	subordinate fmns had held their own tours
10	Mar 1904	Thames District	<i>BA</i> ¹⁰²	Staff Ride	Under Gen Hart
11	May 1904	Dorchester	<i>BA</i> ¹⁰³	Staff Ride	Sir E Wood
12	1904	Portsmouth?	Report ¹⁰⁴	Staff Ride II Corps	
13	7- 13/08/04	Midlands	WO 27/503	Staff Ride	French involved, prior to mans
14	Sep 1904	Southern District	<i>BA</i> ¹⁰⁵	Staff Ride	
15	Sep 1904	Home District	<i>BA</i> ¹⁰⁶	Staff Ride	
16	Autumn 1904	Ireland	<i>ASCQ</i> ¹⁰⁷	Staff Ride	
17	4-Oct 1904	Stirling	WO 279/504	Staff Ride	Details in WO 279/504 very thin
18	27/2/- 3/3/05	Delhi	<i>Cavalry Studies</i> ¹⁰⁸	Cavalry Staff Ride	Set by Haig
19	Mar 1905	NE Dist	<i>BA</i> ¹⁰⁹	Staff Ride	
20	10- 14/4/05	S Coast	WO 279/509	Eastern Command Staff Tour	
21	Sep 1905	Central England	WO 27/504	Aldershot Staff . Tour	
22	15- 22/12/05	Aurangabad	<i>Cavalry Studies</i> ¹¹⁰	Staff Ride	Set by Haig
23	Autumn 1905	Kerry	<i>ANG</i> ¹¹¹	Staff Ride	Lord Grenfell
24	24-Oct 1905	East Coast Scotland	WO 279/511	Staff Tour	GOC Scotland
25	17- 23/1/06	Medak	<i>Cavalry Studies</i> ¹¹²	Staff Ride	Set by Haig

¹⁰¹ *ANG XLV* (27/2/04), p 195.

¹⁰² *BA 72* (26/3/04), p 376.

¹⁰³ *BA 72* (14/5/04), p 583.

¹⁰⁴ *Extracts from a Report on a Staff Ride ... Disembarkation and Establishment of a Base* (1904). This was almost certainly triggered by the 1904 Essex manoeuvres which involved a major landing exercise.

¹⁰⁵ *BA 73*(24/9/04).

¹⁰⁶ *Ibid.*

¹⁰⁷ Capt Napier Nunn 'Outline of [ASC] Duties on a Staff Ride' *ASCQ I* (1907). pp 643-4.

¹⁰⁸ *Ibid* pp 110-130.

¹⁰⁹ *BA LXXIV* (1905), p 123.

¹¹⁰ *Cavalry Studies* pp 156-179

¹¹¹ *ANG XLVI* (23/9/05), p 895.

¹¹² *Cavalry Studies* pp 208-222.

(a)	(b)	(c)	(d)	(e)	(f)
26	Jan 1906	E Comd	BA ¹¹³	Staff Ride	
27	Feb 1906	N Comd	BA ¹¹⁴	Staff Ride	
28	Mar 1906	S Comd	BA ¹¹⁵	Yeomanry Staff Ride.	
29	18-24/3/06	Attock	<i>Cavalry Studies</i> ¹¹⁶	Staff Ride	Set by Haig
30	14-19/5/06	Scotland	WO 279/512	Modified Staff Ride	Hutchinson DSD Director, Col Robertson assists
31	Jun 1906	Tunbridge	BA ¹¹⁷	Staff Ride	Gen B Hamilton
32	5-8 Jul 1906	8 Bde	BA ¹¹⁸	Staff Ride	
33	3-7/9/06	Severn Valley	WO 279/11 ¹¹⁹	Staff Ride	Held by CGS
34	Sep 1906	Lake District	BA ¹²⁰	N Comd Staff Ride	
35	10-16 Sep 1906	S Coast	¹²¹	Aldershot Corps maritime Staff Ride	Included embarkation
36	23-26/9/06	Plymouth	BA ¹²²	Coast Defence Staff Ride	
37	Sep 06	Ireland	BA ¹²³	Irish HQ SR	
38	Oct 1906	Scotland	BA ¹²⁴	Staff Ride	
39	6-9/11/06	Portsmouth	BA ¹²⁵	Staff Ride	Connect Plymouth
40	Jan 1907	Wessex	<i>Cavalry Journal II</i> ¹²⁶	Skeleton exercise rather than staff ride	
41	15-19/4/07 & 29/4-2/5/07	Shoeburyness	WO 279/12	Siege Staff Ride	
42	8-10/4 & 13-18/5/07	South Coast	WO 33/2982	Naval and Military Staff Tour	experiments as well as staff tour
43	6-10/5/07	Chatham	WO 279/15	Siege Staff Ride	Siege Manoeuvres later Chatham

¹¹³ BA 76 (13/1/06), p 53.

¹¹⁴ BA 74 (23/12/05).

¹¹⁵ BA 76 (31/3/06), p 361.

¹¹⁶ *Cavalry Studies* pp 280-318.

¹¹⁷ BA 176 (1906), p 648.

¹¹⁸ BA 76 (27/1/06), p 108

¹¹⁹ Also published as a book; FM Wilson's copy is in the RUSI Library.

¹²⁰ BA 77 (1/9/06), p 245.

¹²¹ *Aldershot Army-Corps Staff Tour and Operations 1906.*

¹²² BA 77 (22/9/06), p 328.

¹²³ BA 77 (29/9/06), p 356.

¹²⁴ BA 77 (22/9/06), p 328.

¹²⁵ BA 77 (3/11/06).

¹²⁶ Brig Gen EC Bethune 'The Cavalry School Staff Ride' *CJ III* (1907).

(a)	(b)	(c)	(d)	(e)	(f)
44	27-31/5/07	S Wales	WO 279/14	Staff Ride	held by DSD
45	1907	Cambridge	BA 79 (14/9/07)	Staff Ride	Pre Aldershot Manoeuvres
46	7-12/10/07	W Midlands	WO 279/17	Staff Ride	Held by CGS
47	13-16/4/08	Essex	WO 279/20	WO Siege Staff	
48	3-8 Jun 1907	Suffolk	BA ¹²⁷	Thames Dist staff Tour	
49	7-16/9/1908	Wessex	WO 279/21	Aldershot Corps	followed by manoeuvres
50	19-21/9/08	Ireland?	WO 279/522	IGF's Staff Ride	
51	26-30/10/08	Midlands	WO 279/22	Staff Tour	Held by CGS. validating <i>FSRs</i>
52	Sep 1908	Ireland	WO 279/522	Ride led by IGF	
53	14-17/10/08	Carlow	WO 279/520	Medical Staff	
54	Nov 1908	Ireland	WO 279/23	Logistic Staff	Led Plumer
55	Nov 1908	Ireland	WO 279/522	Logistic Staff	Developed from IGF's September Ride
56	1909	Quetta	Bond ¹²⁸	Siege Staff Ride	Quetta
57	27-30/1/09	Ulster	WO 279/26	HQ Staff Ride	Army Medical Service
58	1-6/3/09	Berkshire	WO 279/27	Cavalry Staff Ride	Held by DSD
59	21-6/6/09	Wilts	WO 279/29	2 nd " " "	Held by DSD
60	20-/3/09	Ireland	WO 279/28	Irish Command Staff Ride	
61	14-17/3/10	Ireland	WO 279/32	Irish Command Staff Ride.	Lyttelton Director
62	20-22/4/10	East Anglia	WO 279/525	1 st Cavalry Bde Staff Tour	Had an NW Europe Scenario
63	6-9/6/10	Salisbury	WO 279/34	Staff Tour	CIGS led; probably emphasised logistics
64	19-23/6/10	Wessex	WO 279/35	Cavalry Division Staff Ride	

¹²⁷ BA 78 (1/6/07), p 621.

¹²⁸ Bond *Staff* p 205.

(a)	(b)	(c)	(d)	(e)	(f)
65	27/6-1/7/10	Northants	WO 279/36	Aldershot Command Staff	
66	14-16 /10 & 18/123/10	Yorkshire	WO 279/479	Instructional Tour 3 rd West Riding Bde	Also NCOs 5 Y&Ls.
67	16-20/5-1911	Home Counties	WO 279/44 Allenby Papers ¹²⁹	Cavalry Division Staff Tour	Led by Allenby, Vaughan, Ansell and Howell DS
68	7-10/3/11	Canterbury	WO 279/531	2 Cav Bde Staff	Possibly based on ser 66 above.
69	22-25/6/11	Cheltenham	Report MMPs	Aldershot Command Staff	Much on MT resupply
70	Nov 1911		Quetta Orders 9/5/12	Staff Tour Held by CIGS	Quetta reports arrival of 22 copies report on ride
71	22-25/4/12	Oxford	WO 279/533	Aldershot Admin Tour	
72	1912	East Anglia	WO106/1453	Aldershot Staff	Army mans in same area
	21-23/4/13	Berks	MXPs 6	1 Division Staff Tour	Probably relates to later Comd Tour
73	22-25/7/12	Berks/Wilts Hants	WO 27/508 IGF report 1912	Ride for 2x Divs and 2 Cav Bdes	Led by IGHF, represents BEF style problem
74	7-13/6/13	Berks	WO 279/51	Aldershot Comd GS Staff Tour	Probably related to Ser 74 below
75	23-26/6/13	Berks	WO 279/51	Aldershot Admin Staff Tour	
76	March 1914	Eastern District	EDPs V5/11	4 Div Staff Exercise	
77	4-5/6/14	Aldershot	AIR 1/796/204/4/956	Staff Exercise	Involved the RFC

It should be noted that almost certainly more occurred. Staff Colleges' tours and rides have not been included. The most significant deduction from the two tables is not the total but the contrast between the numbers before and after South Africa.

¹²⁹ APs 6/5 Bird/Wavell 1/1/37. Bird was invited to set a staff tour for the cavalry division in 1911 representing the BEF's combating a German invasion of Belgium.

Table 34. Later Careers Camberley DS Before and After South Africa.

Ser	Commandant	DS	Later Career ¹³⁰
(a)	(b)	(c)	(d)
1	Col HSG Miles	-	Staff SAFF, returned Camberley, QMG, Governor Gibraltar 1913.
2	“	Lt Col GFR Henderson	DMI South Africa 1900, Col, CB, died 1903.
3	“	Lt Col HCC Walker	Retired 1903 as Brevet Colonel, Commandant Siege Camp Lydd 1901.
4	“	Lt Col RW Fleming	Not serving 1914.
5	“	Capt ES Heard	GSO 2 and 1 New Zealand, Bde Comd 1915, Col 1915.
6	“	Col RCB Lawrence	Comd TF Mtd Bde.
7	Henry Wilson initial ¹³¹	-	DMO, CIGS, Field Marshal.
8	“	Col JP Du Cane	Lt Gen.
9	“	Col GG Aston	Maj Gen.
10	“	Lt Col L Stopford	Maj Gen.
11	“	Lt Col W Braithwaite	Lt Gen.
12	“	Maj C Sackville-West	Maj Gen 1922.
13	Wilson later	Maj G Harper	GSO 1 DMO, Lt Gen, Corps Comd BEF.
14	“	Lt Col EM Perceval	Lt Gen.
15	“	Maj G Barrow	Lt Gen.
16	“	Maj W Furse	Lt Gen.
17	“	Lt Col C Ross	Maj Gen.
18	Wilson last	Col JE Gough	Brig Gen KIA 1915 on the point of taking over a division.
19	“	Maj CG Stewart	Col.
20	“	Lt Col R Whigham	Lt Gen.

Before 1899 the posts were really backwaters, even Miles the Commandant was not appointed to a senior staff position in the SAFF.

¹³⁰ Col (d) based on *QALs* (various dates).

¹³¹ Maj Gen Callwell *Field Marshal Sir Henry Wilson I* (1927), pp 68,74.

Table 35 Major Manoeuvres in Britain 1890-99.

The table below lists formation sized manoeuvres.

Ser	Date	Reference	Description
(a)	(b)	(c)	(d)
1	1890	Hutton ¹³²	Cavalry
2	Autumn 1891	WO 279/1	Manoeuvres Hants
3	1892	Airlie ¹³³	Cav bde v cav bde
4	1893	WO 279/2	2 Div Manoeuvres
5	1894	WO 279/3	Cavalry Manoeuvres
6	1895	BA ¹³⁴	Ireland
7	1895	BA ¹³⁵	Cav Manoeuvres
8	1895	BA ¹³⁶	New Forest Manoeuvres
9	1896	ANG ¹³⁷	Aldershot
10	1896	ANG ¹³⁸	South of Ireland Manoeuvres
11	1896	ANG ¹³⁹	New Forest Manoeuvres
12	1896	ANG ¹⁴⁰	Curragh Manoeuvres
13	1896	BA ¹⁴¹	SE Dist Manoeuvres
14	1896	BA ¹⁴²	Aldershot mans ¹⁴³
15	1896	ANG ¹⁴⁴	South of Ireland
16	1897	BHG ¹⁴⁵	Cavalry Concentration
17	1897	BA ¹⁴⁶	Kelly Kenny's mans
18	1897	BA ¹⁴⁷	Aldershot mans
19	1897	BA ¹⁴⁸	Irish mans
20	1897	BA ¹⁴⁹	Sussex mans
21	1898	WO 279/4	Buller v Connaught
22	1898	ANG ¹⁵⁰	Salisbury Mans
23	1898	ANG ¹⁵¹	Cav mans
24	1899	BA ¹⁵²	Irish Mans
25	1899	BA ¹⁵³	Aldershot mans
26	1899	BA ¹⁵⁴	SPTA Mans

¹³² Col Hutton 'The Evolution of Mounted Infantry' *EDREV* I (1901).

¹³³ Anon *The Happy Warrior* (Winchester 1901), p 45.

¹³⁴ BA LV (13/7/95).

¹³⁵ BA LV (17/8/95).

¹³⁶ BA LV (24/8/95).

¹³⁷ ANG XXXVII (11/7/96).

¹³⁸ ANG XXXVII (25/7/96).

¹³⁹ ANG XXXVII (4/1/96).

¹⁴⁰ ANG XXXVII (4/1/96).

¹⁴¹ BA LVII (1/8/96).

¹⁴² Ibid.

¹⁴³ BA LVII (12/9/96).

¹⁴⁴ ANG XXXVII (25/7/96).

¹⁴⁵ BHG III (1897), p 5.

¹⁴⁶ BA LIX (5/6/97).

¹⁴⁷ BA LIX (21/8/97).

¹⁴⁸ Ibid.

¹⁴⁹ BA LIX (4/9/97).

¹⁵⁰ ANG XL (20/8/98).

¹⁵¹ ANG XXXIX (11/6/98).

¹⁵² BA LXIII (19/8/99).

¹⁵³ BA LXIII (2/9/99).

Manoeuvres Post 1900

From 1903 manoeuvres generally up to corps level were held each year, with divisional and brigade manoeuvres beforehand. Major manoeuvres were held in 1904, 1907, 1910, 1912 and 1913. The total is far greater than in the period 1890-1899. From contemporary accounts manoeuvres became harder with fewer non-tactical halts while marches were long.

Table 36. Covering Fire Pieters and Colenso.

Ser	Pieter's Pieces and Covering Fire ¹⁵⁵	Infantry Supported at Pieter's	Colenso Pieces and Covering Fire ¹⁵⁶	Infantry Supported at Colenso
(a)	(b)	(c)	(d)	(e)
1	4x 4.7" RN guns	3 Brigades but as attacks were sequential pieces were in theory able to support each brigade. ¹⁵⁷ That the battlefield was relatively small made support easier.	2x4.7" RN guns	As Hart's, Hilyard's and Dundonald's brigades were attacking more or less at once and far apart, guns had to be divided. The battlefield measures some 5 miles across, Pieter's measures about half of this.
2	8x 12 Pdr RN		10x 12 Pdr RN* ¹	
3	6x 5" Hows,		Nil	
4	4x5" guns		Nil	
5	6x 2.5"RML Mtn Guns		Nil	
6	6x 12 Pdr RHA guns		Nil	
7	42x 15 Pdr guns		30x 15 Pdr guns	
8	Two bns, ¹⁵⁸ Dundonald's brigade + machineguns		Nothing laid down in operational orders.	
9	8 Heavy 62 Field Pieces 6 Mtn Guns 76 Total		2 Heavy 36 Field Guns 38 Total	

It should be noted that there were far more HE-capable pieces at Pieter's, further more there were howitzers better suited to give support.

*¹ Taken from Maj Gen Maurice *BROHSA* II (1907), p 649. Amery states 8. Ammunition expenditure was far greater during the Relief than beforehand, *Ibid* Appendix 12. 4.7" RN and 5" guns are regarded as heavy pieces.

¹⁵⁴ *Ibid*.

¹⁵⁵ Amery *THWSA* III (1905), pp 534-5. WO 132/10 'Naval Bde Report of Operations 2/3/00' states that there were also 1x 6", 2x4.7" and 10x 12 Pdrs in the area but not directly supporting the attack. *SAD* II (1901), pp 44-5 suggests that these weapons were used to deceive the Boers. At least one 4.7 supporting the attack was platform-mounted and firing at ranges just over 2000 yards.

¹⁵⁶ *THWSA* II (1902), pp 422,426.

¹⁵⁷ This was not apparently intended; Barton had been told that the attacks were to be simultaneous. *RCWSA Evidence* II (1903), p 661; *SAD* II (1901), p 44.

¹⁵⁸ '5 Division Operation Order 27/2/00' in Maj Gen Maurice *BROHWSA* II (1907), p 508.

Table 37. Artillery South Africa.

Ser	Weapon	In SA 1/6/99 ¹⁵⁹	To SA 1/6/99- 1/6/02 ¹⁶⁰	Misc Wpns /RN ¹⁶¹	Totals	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	15 Pdr BL	27	322	6	355	Standard fieldgun
2	6.3" RML How	2	-	-	2	Used Ladysmith
3	12 Pdr RBL	3	-	-	3	
4	RML 7,9 Pdr and 2.5" guns	52	7	-	59* ₁	Obsolete, black powder ammo
5	3 Pdr QF gun	7	-	-	7* ₁	Ex-coast defence
6	Machineguns	46	315	27 ¹⁶²	388* ₁	RN and private weapons not included
7	9.45" How	-	4	-	4	Austrian weapons siege train
8	6" BL How	-	12	-	12	8 with siege train
9	5" BL How	-	39	-	39	
10	5" Gun	-	18	-	18	
11	4.7" QF Gun	-	24	18	42	4 guns with siege train
12	12 Pdr QF 12 Cwt Gun	-	18 + 4	42* ₂	64	4 in col (d) for Elswick Bty
13	12 Pdr BL 6 Cwt Gun	-	78	18* ₃	78	Standard RHA gun
14	12.5 Pdr QF Gun		4	-	4	CIV Battery
15	Pom Poms	-	57	-	57* ₁	+ captured weapons
16	76mm Hotchkiss Gun	-	1	-	1	Private with Colonial unit
17	9.2" Gun	1	-	-	1	Ex coast defences
18	6" Gun QF	4			4	"
19	Misc	4* ₄		3* ₅	5	
20	6 Pdr QF			4 ¹⁶³	4	
21	Totals of pieces (less sers 4,5, 6,15 and improvised weapons ser 19 less that made at Kimberley) 722					

¹⁵⁹ Some weapons Colonial. Table derived from *RCWSA Appendices* (1903), p 191.

¹⁶⁰ Ibid p 192. No RN Weapons included.

¹⁶¹ Amery *THWSA* VI (1909), p 469.

¹⁶² *RCWSA Appendices* (1903), p 190 Table D.

¹⁶³ Headlam *RA* III (Woolwich 1940), Appendix F. Probably ex-coast defences.

The total in ser 21 is unlikely to be totally accurate as too many sources have been used in compiling this Table. But it has been devised to provide data for Table 38's comparison and the inaccuracies are unlikely to throw the ratio out significantly.

*1 Not included in totals at ser 21.

*2 some RN weapons of slightly different specification and one SB BP gun found at Mafeking.

*3 Canadian unit

*4 2 Captured at Elandslaagte. 2 other 75 mm Krupp captured. Headlam *RA* III, Appendix F

*5 2 Home made guns. One each at Kimberley and Mafeking. Only the Kimberley weapon is counted in Col (f).

*6 Headlam *RA* III p 486; Australian Battery.

Table 38. To show the Ratio of Field to Heavy Artillery in South Africa

Ser	Indicator	Number	Ratio	Remarks
(a)	(b)	(c)	(d)	(e)
1	South Africa Field Artillery	544	5:1	5" Howitzer treated as field weapon
2	South Africa Heavy Artillery	55		
3	Standard Corps Field Artillery	102	102: -	
4	Standard Corps Heavy Artillery	Nil		

In the above table the miscellaneous small calibre guns eg sers 4, 5 and 6 in Table 37 have been ignored as obsolete, as have pom poms and 3 Pdr QFs. These weapons were not field artillery. The aim has been to show how pieces used in the became heavier. The Siege Train sent to South Africa has been ignored; it was a feature of other campaigns and to include it in ser 2 would distort. Sers 3 and 4 above are based on the SAFF corps organisation.

Table 39 Frontage of an Infantry Division in Defence 1898.¹⁶⁴

Ser	Designation	Strength	Frontage	Notes
(a)	(b)	(c)	(d)	(e)
1	Infantry Division Infantry only	8072	8072/5= 1614 paces	
2	Infantry Division All ranks	9792	9792/5=1958 paces	Less chaplains and medical personnel
3	Infantry Division all ranks + 18 guns	9792	1958 paces + 300 yards ¹⁶⁵	This assumes the guns were in the first line.

It should be noted that the layout included considerable depth, see Chapter 6. Serials 1,2 and 3 reflect different strengths. For practical purposes the pace as used in the field can be taken to be one yard. The most important conclusion is that long-range Infantry fire exceeded the divisional frontage.

¹⁶⁴ *WEs 1898* Table LVIII p 149 and a 5 man/pace norm. NB the pace has been taken as equivalent to a yard though it was slightly less.

¹⁶⁵ *FAD 1896* p 127 gives a battery frontage as 100 yards.

Table 40. To Show Relative Proportion Cavalry/Infantry Major European Armies 1901.¹⁶⁶

Ser	Nation	Infantrymen per cavalryman
(a)	(b)	(c)
1	Austria Hungary	3.8
2	Russia	4.2
3	France	4.4
4	Germany	4.5
5	Britain	7.7

Table 41. Relative Strengths/ Perimeter Length Ladysmith, Kimberley, Mafeking.

Ser	Town	Length Perimeter (miles)	Garrison	Artillery	Ratio Miles/Men	Ratio Miles/Pieces
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Ladysmith	14	12,000 ¹⁶⁷	36 x 15 Pdr, 2x 4.7" and 4x12 Pdr RN, 2x 6.3" hows, 2x 9 Pdr RMLs, 2 ex-Boer 12Pdr, 2x3 Pdr ¹⁶⁸	1/860	1/3.5
2	Kimberley	11.75 later 20 ¹⁶⁹	4721	14 RML 7 Pdr later 1 x 28 Pdr RBL home made gun ¹⁷⁰	1/400 1/236	1/1.2 1/0.75
3	Mafeking	6 miles later 10 miles	1000, many armed with Martini Henrys	4x7Pdr RML, 1x2", 1 x1Pdr, 1x home made how and 1 SB ML ¹⁷¹	1/166 1/100	1/1.3 1/0.8

At Ladysmith the artillery was technically far more advanced and its ranges longer, at Mafeking and Kimberley the weapons were obsolete, home-made or both.

¹⁶⁶ Col Graves 'Lessons from the South African War ...' *USM XXIV* (1901).

¹⁶⁷ *RCWSA Evidence II* (1903), pp 152, 633, most were regulars and there was far more artillery.

¹⁶⁸ LS Amery *THWSA III* (1905), p 152 and Gen Maurice *BROHWSA II* (1906), p 489.

¹⁶⁹ B Williams *THWSA IV* (1906), p540.

¹⁷⁰ *Ibid* pp 560-2; there were some 450 regular infantry, 2650 were irregulars.

¹⁷¹ *Ibid* p 424; 700 were trained though few were regulars, there were also 300 armed Africans. *SAD I* (1902), pp 99-100. They were not used as regular combatants and armed with obsolescent rifles. The perimeter was originally 6 miles and was later extended to 10 miles plus, *Ibid* p 105.

Table 42. Commodities sent to South Africa (long tons).¹⁷²

Ser	Commodity	Tonnage
(a)	(b)	(c)
1	Meat	27,170
2	Flour	25,000
3	Hay	574,500
4	Oats	468,000
5	Artillery Ammunition	2800 ¹⁷³

The discrepancy between food and forage suggests how providing an adequate animal ration caused grave logistic difficulties. It should also be noted that the only commodity not produced in volume in South Africa was ammunition. Oats may not have been grown in South Africa but mealies were and were used as animal feed.

Table 43. The SMLE and Martini Henry Compared.¹⁷⁴

Ser	Characteristic	Martini-Henry	SMLE
(a)	(b)	(c)	(d)
1	Propellant	Black Powder	Cordite
2	Muzzle Velocity	1350 fps	2050 fps
3	Magazine	None-single shot	10 round magazine
4	Calibre (ins)	0.45	0.303
5	Introduced	1871	1903
6	Rifle weight	9 lbs	8 lbs
7	Ammo weight	1.8 ozs	1 oz
8	Loading	Round by round	5 round clip

One of the most significant differences was that between the rifles' trajectories. This is hard to represent in a table and can best be seen graphically.¹⁷⁵

¹⁷² *THWSA VI* (1909), p 404 for all data except ser 5. Some totals look remarkably round!

Commodities purchased in South Africa are not included. As no British artillery ammunition except for very small amounts in the besieged garrisons was made in South Africa, the disparity may be wider than the Table suggests.

¹⁷³ Lt Gen McNaughton *The Development of Artillery in the Great War* (nd) p18.

¹⁷⁴ BA Temple and ID Skennerton *A Treatise on the British Military Martini* (Burbank 1983). *Text Book of Small Arms 1904* (1904).

¹⁷⁵ W Greener *The Gun and Its Development* (1907), p 672 has a useful comparison of trajectories.

Table 44. MT in the BEF's 1914 Establishment.¹⁷⁶

Ser	Type of Unit	Cars/ Vans	lorries/ tractors	total units in BEF ¹⁷⁷	total cars & vans (cols c x e)	total lorries (cols dxe)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Cavalry Div Ammunition Park	3	33	1	3	33
2	Ammunition Park 5 Independent Cav Bde	1	12	1	1	12
3	Cavalry Div Supply Colm	-	159	1	-	159
4	Supply Colm 5 Independent Cav Bde	3	39	1	3	39
5	Cav Div HQ	16	-	1	16	-
6	5 Independent Cav Bde HQ	5	-	1	5	-
7	Inf Div Ammo Park	5	93	6	30	558
8	Inf Div Supply Colm	2	41	6	12	246
9	Inf Div HQ	5	-	6	30	-
10	GHQ	16	-	1	16	-
11	GHQ Misc Depts and Services	13	-	1	13	-
12	Corps HQ*1	7	-	3	21	-
13	Corps HQ Sigs Coy*1	-	2	3		6
14	Army Troops Supply Colm	2	24	1	2	24
15	HQ IG Comms & HQ Lines of Comms Defences	5 cars	-	1	5	-
16	Printing Coy	6	-	1	6	-
17	HQ RFC	1	1	1	1	1
17	Aeroplane Sqn	-	24	5	-	120
18	Total				174	1198

Notes:

Motor cycles not included. Col (e) is based on the assumption that the BEF deployed with 3 corps and 6 divisions.

*1 Titled Army in reference.

The Germans mobilised 4000 motor vehicles in 1914 of which some 650 were 4 ton lorries.¹⁷⁸
Given this low proportion of lorries in the total compared to the British, it seems possible that

¹⁷⁶ *WEs. Part I Expeditionary Force 1914* (1914). It should be stressed that the figures are an establishment ie what the BEF was meant to deploy with, not necessarily what it did.

¹⁷⁷ Brig Gen Edmonds *MOFB 1914 I* (1922), Appendix 1.

¹⁷⁸ DB Nash *Imperial German Army Handbook 1914-1918* (1980), p 109.

motor cycles are included in the German figure. It should be noted that the British fielded more motorcycles in the 6 infantry divisions of the BEF than the Germans did for both fronts. In comparison with the Germans, the BEF's 7 divisions had a far higher proportion of MT.

Table 45. Distances and Areas in South Africa.¹⁷⁹

Ser	Colony/State	Area (square miles)
(a)	(b)	(c)
1	Cape Colony	277,151
2	Transvaal	113,640
3	Orange Free State	48,326
4	Natal	18,913
5	Total	458,030

The total compares with the combined areas of France and Germany some 216,000 square miles. In distance:

Cape Town to Pretoria 1040 miles
Cape Town to Kimberley 647 “
Durban to Pretoria 511 “

Table 46. Aircraft Strengths in 1914.¹⁸⁰

Britain 113 first line aircraft.
France 120 first line aircraft.
Germany 232 first line aircraft.
Russia 226 first line aircraft.
Austria-Hungary 36 first line aircraft.

Even allowing for RN aircraft the British proportion per division was far greater than for any continental army.

Annual Register 1900 (1901),p 407.
D Edgerton England and the Aircraft (Basingstoke 1991),p 10.

Annex A. Areas for Further Research

*Only I cut on the timber-only I carved on the stone.
"After me cometh a builder. Tell him, I too have known!"*

It is said of the Royal Regiment of Artillery that doubling one's hits and ignoring the misses is the high way to promotion. This annexe daringly reverses the process, ignoring the bulls, if any, and signalling the outers and the shots that are short, wide or over the stop-butt. Notwithstanding the verse at the start of the bibliographic section, this thesis has many gaps. For understandable reasons it lacks military context as it skirts the tactics of foreign armies. Where comparisons have been made with the French and the Germans, as for example in Tables 15,24 and 31, these are particularly interesting to this author. But far more remains to be done here. There is an interesting project on looking at the influence of foreign armies on British tactics. The SCSI's two conferences on French and German influences on the British Army, though stimulating, have only scratched the surface. Dr Samuels' *Command and Control*'s comparative approach is very interesting, but as Chapter 1 argues, its thesis has a number of flaws. Similarly more work is needed on the Japanese effect on the British treatment of human factors.

Further research is required on military education, discipline and training and their complex interrelationships. Again comparisons with other armies would be useful. This thesis has only examined training in a cursory fashion; detailed analysis of the themes of manoeuvres would be useful. There is probably sufficient material for a thesis in this whole field. Technology has not been explored as fully as this author would wish. There is an important monograph waiting to be written on motorization before 1914. Similarly C3 has only been cursorily examined.

The links between the Army and civil society in the period are also underdeveloped. The question of patriotism and whether there was an alteration in

official attitudes to promoting it are less well explored than this author had hoped would be the case. This thesis has skirted the wider question of Army education and its civil links. The Akers-Douglas Committee on Officer Education influenced the public schools and education. Comparisons with the Royal Navy would illuminate wider trends. The establishment of military lecturers at British universities after 1902 is another area where more work remains to be done. Here it may be noted that the University of London and King's were well to the fore. But this thesis must declare an interest since it was written at King's.

There are other fields needing more study. The very limited examination of Army's and the Navy's attitudes to doctrine is interesting, but more remains to be done. Dr Gordon's *Rules of the Game* suggests that attitudes to initiative varied widely between the Services, again research is needed. Another broad area for examination is the influence of culture on the military. This thesis has touched on the Efficiency Movement but an article could be written about the REs and the Movement.¹ The influence of broad ideas such as Social Darwinism, science, the changes in society and culture and how they affected the Army is again under-researched. The former influenced the offensive stress in tactics at the time. Fortescue suggests that drink was becoming less socially acceptable. This probably improved Army discipline, though fines for drunkenness declined slowly.²

Military discipline needs more examination; a thesis possibly running through from the Victorian era until say 1945 would be invaluable. By studying a relatively long period the process of change would be more comprehensible. Another fascinating area is the question of military and arm cultures. Understanding unit and regimental cultures illuminates areas such as professionalism, attitudes to the Staff College and initiative.

¹ GR Searle *The Quest for National Efficiency* (1971) and The Organisation Society *Rules and Constitution*. (np nd). Swinton and Ward were two influential sapper members.

² JW Fortescue *Following the Drum* (Edinburgh 1931); Table 7.

Further investigation of the LI would possibly shed more light on tactical developments. There is an article waiting to be written on the East Yorkshire Regiment and its series of able psc officers. Why there should have been such a cluster in this regiment remains to be explained. The most notable of them was Coleridge Grove, the Military Secretary. There is work to do on the RA and REs. Both had distinctive cultures, both arms were very influential in the Army's development. The Engineers were undergoing significant change and studying them should illuminate attitudes to technology. By looking at regimental, arm and administrative service cultures wider insights into the Army will probably be obtained. For that matter there is more work to be done on the artillery's tactical and technical history.

It of course would be possible continue until the Last Post is played but there are more 3rd class shots than marksmen and this thesis has only grazed the periphery of the target. But then Kipling has force:

*When 'arf of your bullets fly wide in the ditch,
Don't call your Martini a cross-eyed old bitch,
She's human as you are-you treat her as sich,
An' she'll fight for the young British soldier.*